

Maximum speed tables for magnetic rings



Axial rings



MR020 Axial magnetic ring max speed 26 poles

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr									
13B	8192	212992	53248	2105	1052	263	131	69	35	28	14	7
12B	4096	106496	26624	4209	2105	526	263	137	70	55	28	14
11B	2048	53248	13312	8418	4209	1052	526	274	140	111	56	28
2D0 (001)	2000	52000	13000	8622	4302	1077	538	281	144	113	57	29
1D6	1600	41600	10400	10763	5391	1346	673	351	179	142	71	36
10B	1024	26624	6656	16818	8418	2105	1052	549	280	221	112	56
1D0 (002)	1000	26000	6500	17225	8622	2160	1077	562	287	227	114	57
D80	800	20800	5200	21545	10763	2695	1346	702	359	283	143	72
09B	512	13312	3328	33655	16818	4209	2105	1097	561	443	223	112
D50	500	13000	3250	34468	17225	4302	2160	1124	574	453	229	115
D40 (005)	400	10400	2600	43071	21545	5391	2695	1405	718	567	286	144
D32	320	8320	2080	53852	26917	6738	3360	1756	897	708	357	179
08B	256	6656	1664	58765	33655	8418	4209	2197	1122	886	447	224
D20 (010)	200	5200	1300	58765	43071	10763	5391	2806	1436	1134	572	287
D16	160	4160	1040	53852	26917	6738	3360	1756	897	708	357	179
07B	128	3328	832	58765	58765	16818	8418	4394	2244	1771	893	449
D10 (020)	100	2600	650	58765	43071	10763	5391	2806	1436	1134	572	287
D08	80	2080	520	53852	26917	6738	3360	1756	897	708	357	179
06B	64	1664	416	58765	58765	33655	16818	8788	4487	3542	1786	898
D04 (050)	40	1040	260	53852	26917	6738	3360	1756	897	708	357	179
05B	32	832	208	58765	58765	58765	33655	17557	8975	7085	3573	1796
04B	16	416	104	n/a	58765	58765	58765	35114	17950	14169	7146	3592
03B	8	208	52	n/a	n/a	58765	58765	58765	35900	28338	14292	7184
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR024 Axial magnetic ring max speed 32 poles

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr									
13B	8192	262144	65536	1710	854	214	107	56	28	22	11	6
12B	4096	131072	32768	3420	1710	427	214	111	57	45	23	11
11B	2048	65536	16384	6840	3420	854	427	223	114	90	45	23
2D0 (001)	2000	64000	16000	7005	3495	875	438	228	117	92	46	23
1D6	1600	51200	12800	8745	4380	1094	547	285	146	115	58	29
10B	1024	32768	8192	13665	6840	1710	854	446	228	180	91	46
1D0 (002)	1000	32000	8000	13995	7005	1755	875	457	233	184	93	47
D80	800	25600	6400	17505	8745	2190	1094	571	292	230	116	58
09B	512	16384	4096	27345	13665	3420	1710	892	456	360	181	91
D50	500	16000	4000	28005	13995	3495	1755	913	467	368	186	93
D40 (005)	400	12800	3200	34995	17505	4380	2190	1141	583	461	232	117
D32	320	10240	2560	43755	21870	5475	2730	1427	729	576	290	146
08B	256	8192	2048	47746	27345	6840	3420	1785	912	720	363	182
D20 (010)	200	6400	1600	47746	34995	8745	4380	2280	1167	921	465	233
D16	160	5120	1280	43755	21870	5475	2730	1427	729	576	290	146
07B	128	4096	1024	47746	47746	13665	6840	3570	1823	1439	726	365
D10 (020)	100	3200	800	47746	34995	8745	4380	2280	1167	921	465	233
D08	80	2560	640	43755	21870	5475	2730	1427	729	576	290	146
06B	64	2048	512	47746	47746	27345	13665	7140	3646	2878	1452	730
D04 (050)	40	1280	320	43755	21870	5475	2730	1427	729	576	290	146
05B	32	1024	256	47746	47746	47746	27345	14265	7292	5756	2903	1459
04B	16	512	128	n/a	47746	47746	47746	28530	14584	11512	5806	2918
03B	8	256	64	n/a	n/a	47746	47746	47746	29169	23025	11612	5837
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR026 Axial magnetic ring max speed 36 poles

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	294912	73728	1520	760	190	95	50	25	20	10	5
12B	4096	147456	36864	3040	1520	380	190	99	51	40	20	10
11B	2048	73728	18432	6080	3040	760	380	198	101	80	40	20
2D0 (001)	2000	72000	18000	6227	3107	778	389	203	104	82	41	21
1D6	1600	57600	14400	7773	3893	972	486	254	130	102	52	26
10B	1024	36864	9216	12147	6080	1520	760	396	203	160	81	41
1D0 (002)	1000	36000	9000	12440	6227	1560	778	406	207	164	83	41
D80	800	28800	7200	15560	7773	1947	972	507	259	205	103	52
09B	512	18432	4608	24307	12147	3040	1520	793	405	320	161	81
D50	500	18000	4500	24893	12440	3107	1560	812	415	327	165	83
D40 (005)	400	14400	3600	31107 (28400)	15560	3893	1947	1014	519	409	206	104
D32	320	11520	2880	38893 (28400)	19440	4867	2427	1268	648	512	258	130
08B	256	9216	2304	44074 (28400)	24307	6080	3040	1587	810	640	323	162
D20 (010)	200	7200	1800	44074 (28400)	31107 (28400)	7773	3893	2027	1037	819	413	207
D16	160	5760	1440	38893 (28400)	19440	4867	2427	1268	648	512	258	130
07B	128	4608	1152	44074 (28400)	44074 (28400)	12147	6080	3173	1620	1279	645	324
D10 (020)	100	3600	900	44074 (28400)	31107 (28400)	7773	3893	2027	1037	819	413	207
D08	80	2880	720	38893 (28400)	19440	4867	2427	1268	648	512	258	130
06B	64	2304	576	44074 (28400)	44074 (28400)	24307	12147	6347	3241	2558	1290	649
D04 (050)	40	1440	360	38893 (28400)	19440	4867	2427	1268	648	512	258	130
05B	32	1152	288	44074 (28400)	44074 (28400)	44074 (28400)	24307	12680	6482	5117	2580	1297
04B	16	576	144	n/a	44074 (28400)	44074 (28400)	44074 (28400)	25360	12964	10233	5161	2594
03B	8	288	72	n/a	n/a	44074 (28400)	44074 (28400)	44074 (28400)	25928	20466	10322	5188
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR034 Axial magnetic ring max speed 48 poles

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr									
13B	8192	393216	98304	1140	570	142	71	37	19	15	8	4
12B	4096	196608	49152	2280	1140	285	142	74	38	30	15	8
11B	2048	98304	24576	4560	2280	570	285	149	76	60	30	15
2D0 (001)	2000	96000	24000	4670	2330	583	292	152	78	61	31	16
1D6	1600	76800	19200	5830	2920	729	365	190	97	77	39	19
10B	1024	49152	12288	9110	4560	1140	570	297	152	120	60	30
1D0 (002)	1000	48000	12000	9330	4670	1170	583	304	156	123	62	31
D80	800	38400	9600	11670	5830	1460	729	380	194	154	77	39
09B	512	24576	6144	18230	9110	2280	1140	594	304	240	121	61
D50	500	24000	6000	18670	9330	2330	1170	609	311	246	124	62
D40 (005)	400	19200	4800	23330	11670	2920	1460	761	389	307	155	78
D32	320	15360	3840	29170	14580	3650	1820	951	486	384	194	97
08B	256	12288	3072	33703	18230	4560	2280	1190	608	480	242	122
D20 (010)	200	9600	2400	33703	23330	5830	2920	1520	778	614	310	156
D16	160	7680	1920	29170	14580	3650	1820	951	486	384	194	97
07B	128	6144	1536	33703	33703	9110	4560	2380	1215	959	484	243
D10 (020)	100	4800	1200	33703	23330	5830	2920	1520	778	614	310	156
D08	80	3840	960	29170	14580	3650	1820	951	486	384	194	97
06B	64	3072	768	33703	33703	18230	9110	4760	2431	1919	968	486
D04 (050)	40	1920	480	29170	14580	3650	1820	951	486	384	194	97
05B	32	1536	384	33703	33703	33703	18230	9510	4861	3837	1935	973
04B	16	768	192	n/a	33703	33703	33703	19020	9723	7675	3871	1946
03B	8	384	96	n/a	n/a	33703	33703	33703	19446	15350	7741	3891
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR045 Axial magnetic ring max speed 64 poles

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	524288	131072	855	427	107	53	28	14	11	6	3
12B	4096	262144	65536	1710	855	214	107	56	28	22	11	6
11B	2048	131072	32768	3420	1710	427	214	111	57	45	23	11
2D0 (001)	2000	128000	32000	3503	1748	437	219	114	58	46	23	12
1D6	1600	102400	25600	4373	2190	547	273	143	73	58	29	15
10B	1024	65536	16384	6833	3420	855	427	223	114	90	45	23
1D0 (002)	1000	64000	16000	6998	3503	878	437	228	117	92	46	23
D80	800	51200	12800	8753	4373	1095	547	285	146	115	58	29
09B	512	32768	8192	13673	6833	1710	855	446	228	180	91	46
D50	500	32000	8000	14003	6998	1748	878	457	233	184	93	47
D40 (005)	400	25600	6400	17498 (15975)	8753	2190	1095	571	292	230	116	58
D32	320	20480	5120	21878 (15975)	10935	2738	1365	713	365	288	145	73
08B	256	16384	4096	25465 (15975)	13673	3420	1710	893	456	360	181	91
D20 (010)	200	12800	3200	25465 (15975)	17498 (15975)	4373	2190	1140	583	461	232	117
D16	160	10240	2560	21878 (15975)	10935	2738	1365	713	365	288	145	73
07B	128	8192	2048	25465 (15975)	25465 (15975)	6833	3420	1785	912	720	363	182
D10 (020)	100	6400	1600	25465 (15975)	17498 (15975)	4373	2190	1140	583	461	232	117
D08	80	5120	1280	21878 (15975)	10935	2738	1365	713	365	288	145	73
06B	64	4096	1024	25465 (15975)	25465 (15975)	13673	6833	3570	1823	1439	726	365
D04 (050)	40	2560	640	21878 (15975)	10935	2738	1365	713	365	288	145	73
05B	32	2048	512	25465 (15975)	25465 (15975)	25465 (15975)	13673	7133	3646	2878	1452	730
04B	16	1024	256	n/a	25465 (15975)	25465 (15975)	25465 (15975)	14265	7292	5756	2903	1459
03B	8	512	128	n/a	n/a	25465 (15975)	25465 (15975)	25465 (15975)	14584	11512	5806	2918
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR049 Axial magnetic ring max speed 72 poles

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	589824	147456	760	380	95	47	25	13	10	5	3
12B	4096	294912	73728	1520	760	190	95	50	25	20	10	5
11B	2048	147456	36864	3040	1520	380	190	99	51	40	20	10
2D0 (001)	2000	144000	36000	3113	1553	389	194	101	52	41	21	10
1D6	1600	115200	28800	3887	1947	486	243	127	65	51	26	13
10B	1024	73728	18432	6073	3040	760	380	198	101	80	40	20
1D0 (002)	1000	72000	18000	6220	3113	780	389	203	104	82	41	21
D80	800	57600	14400	7780	3887	973	486	254	130	102	52	26
09B	512	36864	9216	12153	6073	1520	760	396	203	160	81	41
D50	500	36000	9000	12447	6220	1553	780	406	207	164	83	41
D40 (005)	400	28800	7200	15553 (14200)	7780	1947	973	507	259	205	103	52
D32	320	23040	5760	19447 (14200)	9720	2433	1213	634	324	256	129	65
08B	256	18432	4608	23386 (14200)	12153	3040	1520	793	405	320	161	81
D20 (010)	200	14400	3600	23386 (14200)	15553 (14200)	3887	1947	1013	519	409	206	104
D16	160	11520	2880	19447 (14200)	9720	2433	1213	634	324	256	129	65
07B	128	9216	2304	23386 (14200)	23386 (14200)	6073	3040	1587	810	640	323	162
D10 (020)	100	7200	1800	23386 (14200)	15553 (14200)	3887	1947	1013	519	409	206	104
D08	80	5760	1440	19447 (14200)	9720	2433	1213	634	324	256	129	65
06B	64	4608	1152	23386 (14200)	23386 (14200)	12153	6073	3173	1620	1279	645	324
D04 (050)	40	2880	720	19447 (14200)	9720	2433	1213	634	324	256	129	65
05B	32	2304	576	23386 (14200)	23386 (14200)	23386 (14200)	12153	6340	3241	2558	1290	649
04B	16	1152	288	n/a	23386 (14200)	23386 (14200)	23386 (14200)	12680	6482	5117	2580	1297
03B	8	576	144	n/a	n/a	23386 (14200)	23386 (14200)	23386 (14200)	12964	10233	5161	2594
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR050 Axial magnetic ring max speed 72 poles

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	589824	147456	760	380	95	47	25	13	10	5	3
12B	4096	294912	73728	1520	760	190	95	50	25	20	10	5
11B	2048	147456	36864	3040	1520	380	190	99	51	40	20	10
2D0 (001)	2000	144000	36000	3113	1553	389	194	101	52	41	21	10
1D6	1600	115200	28800	3887	1947	486	243	127	65	51	26	13
10B	1024	73728	18432	6073	3040	760	380	198	101	80	40	20
1D0 (002)	1000	72000	18000	6220	3113	780	389	203	104	82	41	21
D80	800	57600	14400	7780	3887	973	486	254	130	102	52	26
09B	512	36864	9216	12153	6073	1520	760	396	203	160	81	41
D50	500	36000	9000	12447	6220	1553	780	406	207	164	83	41
D40 (005)	400	28800	7200	15553 (14200)	7780	1947	973	507	259	205	103	52
D32	320	23040	5760	19447 (14200)	9720	2433	1213	634	324	256	129	65
08B	256	18432	4608	22918 (14200)	12153	3040	1520	793	405	320	161	81
D20 (010)	200	14400	3600	22918 (14200)	15553 (14200)	3887	1947	1013	519	409	206	104
D16	160	11520	2880	19447 (14200)	9720	2433	1213	634	324	256	129	65
07B	128	9216	2304	22918 (14200)	22918 (14200)	6073	3040	1587	810	640	323	162
D10 (020)	100	7200	1800	22918 (14200)	15553 (14200)	3887	1947	1013	519	409	206	104
D08	80	5760	1440	19447 (14200)	9720	2433	1213	634	324	256	129	65
06B	64	4608	1152	22918 (14200)	22918 (14200)	12153	6073	3173	1620	1279	645	324
D04 (050)	40	2880	720	19447 (14200)	9720	2433	1213	634	324	256	129	65
05B	32	2304	576	22918 (14200)	22918 (14200)	22918 (14200)	12153	6340	3241	2558	1290	649
04B	16	1152	288	n/a	22918 (14200)	22918 (14200)	22918 (14200)	12680	6482	5117	2580	1297
03B	8	576	144	n/a	n/a	22918 (14200)	22918 (14200)	22918 (14200)	12964	10233	5161	2594
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR061 Axial magnetic ring max speed 90 poles

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	737280	184320	608	304	76	38	20	10	8	4	2
12B	4096	368640	92160	1216	608	152	76	40	20	16	8	4
11B	2048	184320	46080	2432	1216	304	152	79	41	32	16	8
2D0 (001)	2000	180000	45000	2491	1243	311	156	81	41	33	17	8
1D6	1600	144000	36000	3109	1557	389	194	101	52	41	21	10
10B	1024	92160	23040	4859	2432	608	304	159	81	64	32	16
1D0 (002)	1000	90000	22500	4976	2491	624	311	162	83	65	33	17
D80	800	72000	18000	6224	3109	779	389	203	104	82	41	21
09B	512	46080	11520	9723	4859	1216	608	317	162	128	65	32
D50	500	45000	11250	9957	4976	1243	624	325	166	131	66	33
D40 (005)	400	36000	9000	12443 (11360)	6224	1557	779	406	207	164	83	41
D32	320	28800	7200	15557 (11360)	7776	1947	971	507	259	205	103	52
08B	256	23040	5760	18694 (11360)	9723	2432	1216	635	324	256	129	65
D20 (010)	200	18000	4500	18694 (11360)	12443 (11360)	3109	1557	811	415	327	165	83
D16	160	14400	3600	15557 (11360)	7776	1947	971	507	259	205	103	52
07B	128	11520	2880	18694 (11360)	18694 (11360)	4859	2432	1269	648	512	258	130
D10 (020)	100	9000	2250	18694 (11360)	12443 (11360)	3109	1557	811	415	327	165	83
D08	80	7200	1800	15557 (11360)	7776	1947	971	507	259	205	103	52
06B	64	5760	1440	18694 (11360)	18694 (11360)	9723	4859	2539	1296	1023	516	259
D04 (050)	40	3600	900	15557 (11360)	7776	1947	971	507	259	205	103	52
05B	32	2880	720	18694 (11360)	18694 (11360)	18694 (11360)	9723	5072	2593	2047	1032	519
04B	16	1440	360	n/a	18694 (11360)	18694 (11360)	18694 (11360)	10144	5186	4093	2064	1038
03B	8	720	180	n/a	n/a	18694 (11360)	18694 (11360)	18694 (11360)	10371	8187	4129	2075
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR061 Axial magnetic ring max speed 92 poles

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	753664	188416	595	297	74	37	19	10	8	4	2
12B	4096	376832	94208	1190	595	149	74	39	20	16	8	4
11B	2048	188416	47104	2379	1190	297	149	78	40	31	16	8
2D0 (001)	2000	184000	46000	2437	1216	304	152	79	41	32	16	8
1D6	1600	147200	36800	3042	1523	380	190	99	51	40	20	10
10B	1024	94208	23552	4753	2379	595	297	155	79	63	32	16
1D0 (002)	1000	92000	23000	4868	2437	610	304	159	81	64	32	16
D80	800	73600	18400	6089	3042	762	380	198	101	80	40	20
09B	512	47104	11776	9511	4753	1190	595	310	159	125	63	32
D50	500	46000	11500	9741	4868	1216	610	318	162	128	65	32
D40 (005)	400	36800	9200	12172 (11113)	6089	1523	762	397	203	160	81	41
D32	320	29440	7360	15219 (11113)	7607	1904	950	496	254	200	101	51
08B	256	23552	5888	18694 (11113)	9511	2379	1190	621	317	250	126	63
D20 (010)	200	18400	4600	18694 (11113)	12172 (11113)	3042	1523	793	406	320	162	81
D16	160	14720	3680	15219 (11113)	7607	1904	950	496	254	200	101	51
07B	128	11776	2944	18694 (11113)	18694 (11113)	4753	2379	1242	634	501	252	127
D10 (020)	100	9200	2300	18694 (11113)	12172 (11113)	3042	1523	793	406	320	162	81
D08	80	7360	1840	15219 (11113)	7607	1904	950	496	254	200	101	51
06B	64	5888	1472	18694 (11113)	18694 (11113)	9511	4753	2483	1268	1001	505	254
D04 (050)	40	3680	920	15219 (11113)	7607	1904	950	496	254	200	101	51
05B	32	2944	736	18694 (11113)	18694 (11113)	18694 (11113)	9511	4962	2536	2002	1010	508
04B	16	1472	368	n/a	18694 (11113)	18694 (11113)	18694 (11113)	9923	5073	4004	2020	1015
03B	8	736	184	n/a	n/a	18694 (11113)	18694 (11113)	18694 (11113)	10146	8009	4039	2030
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR080 Axial magnetic ring max speed 122 poles

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	999424	249856	449	224	56	28	15	7	6	3	1
12B	4096	499712	124928	897	449	112	56	29	15	12	6	3
11B	2048	249856	62464	1794	897	224	112	58	30	24	12	6
2D0 (001)	2000	244000	61000	1837	917	230	115	60	31	24	12	6
1D6	1600	195200	48800	2294	1149	287	143	75	38	30	15	8
10B	1024	124928	31232	3584	1794	449	224	117	60	47	24	12
1D0 (002)	1000	122000	30500	3671	1837	460	230	120	61	48	24	12
D80	800	97600	24400	4591	2294	574	287	150	77	60	30	15
09B	512	62464	15616	7172	3584	897	449	234	120	94	48	24
D50	500	61000	15250	7346	3671	917	460	239	122	97	49	24
D40 (005)	400	48800	12200	9179 (8380)	4591	1149	574	299	153	121	61	31
D32	320	39040	9760	11477 (8380)	5736	1436	716	374	191	151	76	38
08B	256	31232	7808	14324 (8380)	7172	1794	897	468	239	189	95	48
D20 (010)	200	24400	6100	14324 (8380)	9179 (8380)	2294	1149	598	306	242	122	61
D16	160	19520	4880	11477 (8380)	5736	1436	716	374	191	151	76	38
07B	128	15616	3904	14324 (8380)	14324 (8380)	3584	1794	936	478	377	190	96
D10 (020)	100	12200	3050	14324 (8380)	9179 (8380)	2294	1149	598	306	242	122	61
D08	80	9760	2440	11477 (8380)	5736	1436	716	374	191	151	76	38
06B	64	7808	1952	14324 (8380)	14324 (8380)	7172	3584	1873	956	755	381	191
D04 (050)	40	4880	1220	11477 (8380)	5736	1436	716	374	191	151	76	38
05B	32	3904	976	14324 (8380)	14324 (8380)	14324 (8380)	7172	3742	1913	1510	761	383
04B	16	1952	488	n/a	14324 (8380)	14324 (8380)	14324 (8380)	7483	3825	3020	1523	765
03B	8	976	244	n/a	n/a	14324 (8380)	14324 (8380)	14324 (8380)	7651	6039	3046	1531
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR100 Axial magnetic ring max speed 152 poles

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	1245184	311296	360	180	45	22	12	6	5	2	1
12B	4096	622592	155648	720	360	90	45	23	12	9	5	2
11B	2048	311296	77824	1440	720	180	90	47	24	19	10	5
2D0 (001)	2000	304000	76000	1475	736	184	92	48	25	19	10	5
1D6	1600	243200	60800	1841	922	230	115	60	31	24	12	6
10B	1024	155648	38912	2877	1440	360	180	94	48	38	19	10
1D0 (002)	1000	152000	38000	2946	1475	369	184	96	49	39	20	10
D80	800	121600	30400	3685	1841	461	230	120	61	48	24	12
09B	512	77824	19456	5757	2877	720	360	188	96	76	38	19
D50	500	76000	19000	5896	2946	736	369	192	98	78	39	20
D40 (005)	400	60800	15200	7367 (6726)	3685	922	461	240	123	97	49	25
D32	320	48640	12160	9212 (6726)	4604	1153	575	300	154	121	61	31
08B	256	38912	9728	11459 (6726)	5757	1440	720	376	192	151	76	38
D20 (010)	200	30400	7600	11459 (6726)	7367 (6726)	1841	922	480	246	194	98	49
D16	160	24320	6080	9212 (6726)	4604	1153	575	300	154	121	61	31
07B	128	19456	4864	11459 (6726)	11459 (6726)	2877	1440	752	384	303	153	77
D10 (020)	100	15200	3800	11459 (6726)	7367 (6726)	1841	922	480	246	194	98	49
D08	80	12160	3040	9212 (6726)	4604	1153	575	300	154	121	61	31
06B	64	9728	2432	11459 (6726)	11459 (6726)	5757	2877	1503	768	606	306	154
D04 (050)	40	6080	1520	9212 (6726)	4604	1153	575	300	154	121	61	31
05B	32	4864	1216	11459 (6726)	11459 (6726)	11459 (6726)	5757	3003	1535	1212	611	307
04B	16	2432	608	n/a	11459 (6726)	11459 (6726)	11459 (6726)	6006	3070	2424	1222	614
03B	8	1216	304	n/a	n/a	11459 (6726)	11459 (6726)	11459 (6726)	6141	4847	2445	1229
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

Radial rings



MR031E Radial magnetic ring max speed 50 poles without protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	409600	102400	1094	547	137	68	36	18	14	7	4
12B	4096	204800	51200	2189	1094	273	137	71	36	29	15	7
11B	2048	102400	25600	4378	2189	547	273	143	73	58	29	15
2D0 (001)	2000	100000	25000	4483	2237	560	280	146	75	59	30	15
1D6	1600	80000	20000	5597	2803	700	350	183	93	74	37	19
10B	1024	51200	12800	8746	4378	1094	547	285	146	115	58	29
1D0 (002)	1000	50000	12500	8957	4483	1123	560	292	149	118	59	30
D80	800	40000	10000	11203	5597	1402	700	365	187	147	74	37
09B	512	25600	6400	17501	8746	2189	1094	571	292	230	116	58
D50	500	25000	6250	17923	8957	2237	1123	584	299	236	119	60
D40 (005)	400	20000	5000	22397 (20448)	11203	2803	1402	730	373	295	149	75
D32	320	16000	4000	28003 (20448)	13997	3504	1747	913	467	368	186	93
08B	256	12800	3200	35002 (20448)	17501	4378	2189	1142	583	460	232	117
D20 (010)	200	10000	2500	35979 (20448)	22397 (20448)	5597	2803	1459	747	589	297	149
D16	160	8000	2000	28003 (20448)	13997	3504	1747	913	467	368	186	93
07B	128	6400	1600	35979 (20448)	35002 (20448)	8746	4378	2285	1167	921	464	233
D10 (020)	100	5000	1250	35979 (20448)	22397 (20448)	5597	2803	1459	747	589	297	149
D08	80	4000	1000	28003 (20448)	13997	3504	1747	913	467	368	186	93
06B	64	3200	800	35979 (20448)	35979 (20448)	17501	8746	4570	2333	1842	929	467
D04 (050)	40	2000	500	28003 (20448)	13997	3504	1747	913	467	368	186	93
05B	32	1600	400	35979 (20448)	35979 (20448)	35002 (20448)	17501	9130	4667	3684	1858	934
04B	16	800	200	n/a	35979 (20448)	35979 (20448)	35002 (20448)	18259	9334	7368	3716	1868
03B	8	400	100	n/a	n/a	35979 (20448)	35979 (20448)	35979 (20448)	18668	14736	7432	3736
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR031E Radial magnetic ring max speed 50 poles with protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	409600	102400	1094	547	137	68	36	18	14	7	4
12B	4096	204800	51200	2189	1094	273	137	71	36	29	15	7
11B	2048	102400	25600	4378	2189	547	273	143	73	58	29	15
2D0 (001)	2000	100000	25000	4483	2237	560	280	146	75	59	30	15
1D6	1600	80000	20000	5597	2803	700	350	183	93	74	37	19
10B	1024	51200	12800	8746	4378	1094	547	285	146	115	58	29
1D0 (002)	1000	50000	12500	8957	4483	1123	560	292	149	118	59	30
D80	800	40000	10000	11203	5597	1402	700	365	187	147	74	37
09B	512	25600	6400	17501	8746	2189	1094	571	292	230	116	58
D50	500	25000	6250	17923	8957	2237	1123	584	299	236	119	60
D40 (005)	400	20000	5000	22397 (20448)	11203	2803	1402	730	373	295	149	75
D32	320	16000	4000	28003 (20448)	13997	3504	1747	913	467	368	186	93
08B	256	12800	3200	35002 (20448)	17501	4378	2189	1142	583	460	232	117
D20 (010)	200	10000	2500	44803 (20448)	22397 (20448)	5597	2803	1459	747	589	297	149
D16	160	8000	2000	28003 (20448)	13997	3504	1747	913	467	368	186	93
07B	128	6400	1600	70003 (20448)	35002 (20448)	8746	4378	2285	1167	921	464	233
D10 (020)	100	5000	1250	44803 (20448)	22397 (20448)	5597	2803	1459	747	589	297	149
D08	80	4000	1000	28003 (20448)	13997	3504	1747	913	467	368	186	93
06B	64	3200	800	75375 (20448)	70003 (20448)	17501	8746	4570	2333	1842	929	467
D04 (050)	40	2000	500	28003 (20448)	13997	3504	1747	913	467	368	186	93
05B	32	1600	400	75375 (20448)	75375 (20448)	35002 (20448)	17501	9130	4667	3684	1858	934
04B	16	800	200	n/a	75375 (20448)	70003 (20448)	35002 (20448)	18259	9334	7368	3716	1868
03B	8	400	100	n/a	n/a	75375 (20448)	70003 (20448)	36518 (20448)	18668	14736	7432	3736
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR031E Radial magnetic ring max speed 20 poles without protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr									
13B	8192	163840	40960	2736	1367	342	171	89	46	36	18	9
12B	4096	81920	20480	5472	2736	684	342	178	91	72	36	18
11B	2048	40960	10240	10944	5472	1367	684	357	182	144	73	36
2D0 (001)	2000	40000	10000	11208	5592	1400	700	365	187	147	74	37
1D6	1600	32000	8000	13992	7008	1750	875	457	233	184	93	47
10B	1024	20480	5120	21864	10944	2736	1367	713	365	288	145	73
1D0 (002)	1000	20000	5000	22392	11208	2808	1400	730	373	295	149	75
D80	800	16000	4000	28008	13992	3504	1750	913	467	368	186	93
09B	512	10240	2560	35979	21864	5472	2736	1427	729	576	290	146
D50	500	10000	2500	35979	22392	5592	2808	1461	747	589	297	149
D40 (005)	400	8000	2000	35979	28008	7008	3504	1826	933	737	372	187
D32	320	6400	1600	35979	34992	8760	4368	2283	1167	921	465	233
08B	256	5120	1280	35979	35979	10944	5472	2856	1458	1151	581	292
D20 (010)	200	4000	1000	35979	35979	13992	7008	3648	1867	1474	743	373
D16	160	3200	800	35979	34992	8760	4368	2283	1167	921	465	233
07B	128	2560	640	35979	35979	21864	10944	5712	2917	2302	1161	584
D10 (020)	100	2000	500	35979	35979	13992	7008	3648	1867	1474	743	373
D08	80	1600	400	35979	34992	8760	4368	2283	1167	921	465	233
06B	64	1280	320	35979	35979	35979	21864	11424	5834	4605	2322	1167
D04 (050)	40	800	200	35979	34992	8760	4368	2283	1167	921	465	233
05B	32	640	160	35979	35979	35979	35979	22824	11667	9210	4645	2335
04B	16	320	80	n/a	35979	35979	35979	35979	23335	18420	9290	4669
03B	8	160	40	n/a	n/a	35979	35979	35979	35979	35979	18579	9339
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR031E Radial magnetic ring max speed 20 poles with protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	2736	1367	342	171	89	46	36	18	9
13B	8192	163840	40960	2736	1367	342	171	89	46	36	18	9
12B	4096	81920	20480	5472	2736	684	342	178	91	72	36	18
11B	2048	40960	10240	10944	5472	1367	684	357	182	144	73	36
2D0 (001)	2000	40000	10000	11208	5592	1400	700	365	187	147	74	37
1D6	1600	32000	8000	13992	7008	1750	875	457	233	184	93	47
10B	1024	20480	5120	21864	10944	2736	1367	713	365	288	145	73
1D0 (002)	1000	20000	5000	22392	11208	2808	1400	730	373	295	149	75
D80	800	16000	4000	28008	13992	3504	1750	913	467	368	186	93
09B	512	10240	2560	43752	21864	5472	2736	1427	729	576	290	146
D50	500	10000	2500	44808	22392	5592	2808	1461	747	589	297	149
D40 (005)	400	8000	2000	55992	28008	7008	3504	1826	933	737	372	187
D32	320	6400	1600	70008	34992	8760	4368	2283	1167	921	465	233
08B	256	5120	1280	75375	43752	10944	5472	2856	1458	1151	581	292
D20 (010)	200	4000	1000	75375	55992	13992	7008	3648	1867	1474	743	373
D16	160	3200	800	70008	34992	8760	4368	2283	1167	921	465	233
07B	128	2560	640	75375	75375	21864	10944	5712	2917	2302	1161	584
D10 (020)	100	2000	500	75375	55992	13992	7008	3648	1867	1474	743	373
D08	80	1600	400	70008	34992	8760	4368	2283	1167	921	465	233
06B	64	1280	320	75375	75375	43752	21864	11424	5834	4605	2322	1167
D04 (050)	40	800	200	70008	34992	8760	4368	2283	1167	921	465	233
05B	32	640	160	75375	75375	75375	43752	22824	11667	9210	4645	2335
04B	16	320	80	n/a	75375	75375	75375	45648	23335	18420	9290	4669
03B	8	160	40	n/a	n/a	75375	75375	75375	46670	36839	18579	9339
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR031G Radial magnetic ring max speed 50 poles without protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	409600	102400	1094	547	137	68	36	18	14	7	4
12B	4096	204800	51200	2189	1094	273	137	71	36	29	15	7
11B	2048	102400	25600	4378	2189	547	273	143	73	58	29	15
2D0 (001)	2000	100000	25000	4483	2237	560	280	146	75	59	30	15
1D6	1600	80000	20000	5597	2803	700	350	183	93	74	37	19
10B	1024	51200	12800	8746	4378	1094	547	285	146	115	58	29
1D0 (002)	1000	50000	12500	8957	4483	1123	560	292	149	118	59	30
D80	800	40000	10000	11203	5597	1402	700	365	187	147	74	37
09B	512	25600	6400	17501	8746	2189	1094	571	292	230	116	58
D50	500	25000	6250	17923	8957	2237	1123	584	299	236	119	60
D40 (005)	400	20000	5000	22397 (20448)	11203	2803	1402	730	373	295	149	75
D32	320	16000	4000	28003 (20448)	13997	3504	1747	913	467	368	186	93
08B	256	12800	3200	35002 (20448)	17501	4378	2189	1142	583	460	232	117
D20 (010)	200	10000	2500	35979 (20448)	22397 (20448)	5597	2803	1459	747	589	297	149
D16	160	8000	2000	28003 (20448)	13997	3504	1747	913	467	368	186	93
07B	128	6400	1600	35979 (20448)	35002 (20448)	8746	4378	2285	1167	921	464	233
D10 (020)	100	5000	1250	35979 (20448)	22397 (20448)	5597	2803	1459	747	589	297	149
D08	80	4000	1000	28003 (20448)	13997	3504	1747	913	467	368	186	93
06B	64	3200	800	35979 (20448)	35979 (20448)	17501	8746	4570	2333	1842	929	467
D04 (050)	40	2000	500	28003 (20448)	13997	3504	1747	913	467	368	186	93
05B	32	1600	400	35979 (20448)	35979 (20448)	35002 (20448)	17501	9130	4667	3684	1858	934
04B	16	800	200	n/a	35979 (20448)	35979 (20448)	35002 (20448)	18259	9334	7368	3716	1868
03B	8	400	100	n/a	n/a	35979 (20448)	35979 (20448)	35979 (20448)	18668	14736	7432	3736
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR031G Radial magnetic ring max speed 20 poles without protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr									
13B	8192	163840	40960	2736	1367	342	171	89	46	36	18	9
12B	4096	81920	20480	5472	2736	684	342	178	91	72	36	18
11B	2048	40960	10240	10944	5472	1367	684	357	182	144	73	36
2D0 (001)	2000	40000	10000	11208	5592	1400	700	365	187	147	74	37
1D6	1600	32000	8000	13992	7008	1750	875	457	233	184	93	47
10B	1024	20480	5120	21864	10944	2736	1367	713	365	288	145	73
1D0 (002)	1000	20000	5000	22392	11208	2808	1400	730	373	295	149	75
D80	800	16000	4000	28008	13992	3504	1750	913	467	368	186	93
09B	512	10240	2560	35979	21864	5472	2736	1427	729	576	290	146
D50	500	10000	2500	35979	22392	5592	2808	1461	747	589	297	149
D40 (005)	400	8000	2000	35979	28008	7008	3504	1826	933	737	372	187
D32	320	6400	1600	35979	34992	8760	4368	2283	1167	921	465	233
08B	256	5120	1280	35979	35979	10944	5472	2856	1458	1151	581	292
D20 (010)	200	4000	1000	35979	35979	13992	7008	3648	1867	1474	743	373
D16	160	3200	800	35979	34992	8760	4368	2283	1167	921	465	233
07B	128	2560	640	35979	35979	21864	10944	5712	2917	2302	1161	584
D10 (020)	100	2000	500	35979	35979	13992	7008	3648	1867	1474	743	373
D08	80	1600	400	35979	34992	8760	4368	2283	1167	921	465	233
06B	64	1280	320	35979	35979	35979	21864	11424	5834	4605	2322	1167
D04 (050)	40	800	200	35979	34992	8760	4368	2283	1167	921	465	233
05B	32	640	160	35979	35979	35979	35979	22824	11667	9210	4645	2335
04B	16	320	80	n/a	35979	35979	35979	35979	23335	18420	9290	4669
03B	8	160	40	n/a	n/a	35979	35979	35979	35979	35979	18579	9339
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR040E Radial magnetic ring max speed 64 poles without protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	524288	131072	855	427	107	53	28	14	11	6	3
12B	4096	262144	65536	1710	855	214	107	56	28	22	11	6
11B	2048	131072	32768	3420	1710	427	214	111	57	45	23	11
2D0 (001)	2000	128000	32000	3503	1748	437	219	114	58	46	23	12
1D6	1600	102400	25600	4373	2190	547	273	143	73	58	29	15
10B	1024	65536	16384	6833	3420	855	427	223	114	90	45	23
1D0 (002)	1000	64000	16000	6998	3503	878	437	228	117	92	46	23
D80	800	51200	12800	8753	4373	1095	547	285	146	115	58	29
09B	512	32768	8192	13673	6833	1710	855	446	228	180	91	46
D50	500	32000	8000	14003	6998	1748	878	457	233	184	93	47
D40 (005)	400	25600	6400	17498 (15975)	8753	2190	1095	571	292	230	116	58
D32	320	20480	5120	21878 (15975)	10935	2738	1365	713	365	288	145	73
08B	256	16384	4096	27345 (15975)	13673	3420	1710	893	456	360	181	91
D20 (010)	200	12800	3200	28086 (15975)	17498 (15975)	4373	2190	1140	583	461	232	117
D16	160	10240	2560	21878 (15975)	10935	2738	1365	713	365	288	145	73
07B	128	8192	2048	28086 (15975)	27345 (15975)	6833	3420	1785	912	720	363	182
D10 (020)	100	6400	1600	28086 (15975)	17498 (15975)	4373	2190	1140	583	461	232	117
D08	80	5120	1280	21878 (15975)	10935	2738	1365	713	365	288	145	73
06B	64	4096	1024	28086 (15975)	28086 (15975)	13673	6833	3570	1823	1439	726	365
D04 (050)	40	2560	640	21878 (15975)	10935	2738	1365	713	365	288	145	73
05B	32	2048	512	28086 (15975)	28086 (15975)	27345 (15975)	13673	7133	3646	2878	1452	730
04B	16	1024	256	n/a	28086 (15975)	28086 (15975)	27345 (15975)	14265	7292	5756	2903	1459
03B	8	512	128	n/a	n/a	28086 (15975)	28086 (15975)	28086 (15975)	14584	11512	5806	2918
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR040E Radial magnetic ring max speed 64 poles with protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	524288	131072	855	427	107	53	28	14	11	6	3
12B	4096	262144	65536	1710	855	214	107	56	28	22	11	6
11B	2048	131072	32768	3420	1710	427	214	111	57	45	23	11
2D0 (001)	2000	128000	32000	3503	1748	437	219	114	58	46	23	12
1D6	1600	102400	25600	4373	2190	547	273	143	73	58	29	15
10B	1024	65536	16384	6833	3420	855	427	223	114	90	45	23
1D0 (002)	1000	64000	16000	6998	3503	878	437	228	117	92	46	23
D80	800	51200	12800	8753	4373	1095	547	285	146	115	58	29
09B	512	32768	8192	13673	6833	1710	855	446	228	180	91	46
D50	500	32000	8000	14003	6998	1748	878	457	233	184	93	47
D40 (005)	400	25600	6400	17498 (15975)	8753	2190	1095	571	292	230	116	58
D32	320	20480	5120	21878 (15975)	10935	2738	1365	713	365	288	145	73
08B	256	16384	4096	27345 (15975)	13673	3420	1710	893	456	360	181	91
D20 (010)	200	12800	3200	35003 (15975)	17498 (15975)	4373	2190	1140	583	461	232	117
D16	160	10240	2560	21878 (15975)	10935	2738	1365	713	365	288	145	73
07B	128	8192	2048	54690 (15975)	27345 (15975)	6833	3420	1785	912	720	363	182
D10 (020)	100	6400	1600	35003 (15975)	17498 (15975)	4373	2190	1140	583	461	232	117
D08	80	5120	1280	21878 (15975)	10935	2738	1365	713	365	288	145	73
06B	64	4096	1024	58841 (15975)	54690 (15975)	13673	6833	3570	1823	1439	726	365
D04 (050)	40	2560	640	21878 (15975)	10935	2738	1365	713	365	288	145	73
05B	32	2048	512	58841 (15975)	58841 (15975)	27345 (15975)	13673	7133	3646	2878	1452	730
04B	16	1024	256	n/a	58841 (15975)	54690 (15975)	27345 (15975)	14265	7292	5756	2903	1459
03B	8	512	128	n/a	n/a	58841 (15975)	54690 (15975)	28530 (15975)	14584	11512	5806	2918
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR040E Radial magnetic ring max speed 26 poles without protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr									
13B	8192	212992	53248	2105	1052	263	131	69	35	28	14	7
12B	4096	106496	26624	4209	2105	526	263	137	70	55	28	14
11B	2048	53248	13312	8418	4209	1052	526	274	140	111	56	28
2D0 (001)	2000	52000	13000	8622	4302	1077	538	281	144	113	57	29
1D6	1600	41600	10400	10763	5391	1346	673	351	179	142	71	36
10B	1024	26624	6656	16818	8418	2105	1052	549	280	221	112	56
1D0 (002)	1000	26000	6500	17225	8622	2160	1077	562	287	227	114	57
D80	800	20800	5200	21545	10763	2695	1346	702	359	283	143	72
09B	512	13312	3328	28086	16818	4209	2105	1097	561	443	223	112
D50	500	13000	3250	28086	17225	4302	2160	1124	574	453	229	115
D40 (005)	400	10400	2600	28086	21545	5391	2695	1405	718	567	286	144
D32	320	8320	2080	28086	26917	6738	3360	1756	897	708	357	179
08B	256	6656	1664	28086	28086	8418	4209	2197	1122	886	447	224
D20 (010)	200	5200	1300	28086	28086	10763	5391	2806	1436	1134	572	287
D16	160	4160	1040	28086	26917	6738	3360	1756	897	708	357	179
07B	128	3328	832	28086	28086	16818	8418	4394	2244	1771	893	449
D10 (020)	100	2600	650	28086	28086	10763	5391	2806	1436	1134	572	287
D08	80	2080	520	28086	26917	6738	3360	1756	897	708	357	179
06B	64	1664	416	28086	28086	28086	16818	8788	4487	3542	1786	898
D04 (050)	40	1040	260	28086	26917	6738	3360	1756	897	708	357	179
05B	32	832	208	28086	28086	28086	28086	17557	8975	7085	3573	1796
04B	16	416	104	n/a	28086	28086	28086	28086	17950	14169	7146	3592
03B	8	208	52	n/a	n/a	28086	28086	28086	28086	28086	14292	7184
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR040E Radial magnetic ring max speed 26 poles with protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr									
13B	8192	212992	53248	2105	1052	263	131	69	35	28	14	7
12B	4096	106496	26624	4209	2105	526	263	137	70	55	28	14
11B	2048	53248	13312	8418	4209	1052	526	274	140	111	56	28
2D0 (001)	2000	52000	13000	8622	4302	1077	538	281	144	113	57	29
1D6	1600	41600	10400	10763	5391	1346	673	351	179	142	71	36
10B	1024	26624	6656	16818	8418	2105	1052	549	280	221	112	56
1D0 (002)	1000	26000	6500	17225	8622	2160	1077	562	287	227	114	57
D80	800	20800	5200	21545	10763	2695	1346	702	359	283	143	72
09B	512	13312	3328	33655	16818	4209	2105	1097	561	443	223	112
D50	500	13000	3250	34468	17225	4302	2160	1124	574	453	229	115
D40 (005)	400	10400	2600	43071	21545	5391	2695	1405	718	567	286	144
D32	320	8320	2080	53852	26917	6738	3360	1756	897	708	357	179
08B	256	6656	1664	58841	33655	8418	4209	2197	1122	886	447	224
D20 (010)	200	5200	1300	58841	43071	10763	5391	2806	1436	1134	572	287
D16	160	4160	1040	53852	26917	6738	3360	1756	897	708	357	179
07B	128	3328	832	58841	58841	16818	8418	4394	2244	1771	893	449
D10 (020)	100	2600	650	58841	43071	10763	5391	2806	1436	1134	572	287
D08	80	2080	520	53852	26917	6738	3360	1756	897	708	357	179
06B	64	1664	416	58841	58841	33655	16818	8788	4487	3542	1786	898
D04 (050)	40	1040	260	53852	26917	6738	3360	1756	897	708	357	179
05B	32	832	208	58841	58841	58841	33655	17557	8975	7085	3573	1796
04B	16	416	104	n/a	58841	58841	58841	35114	17950	14169	7146	3592
03B	8	208	52	n/a	n/a	58841	58841	58841	35900	28338	14292	7184
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR040G Radial magnetic ring max speed 64 poles without protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	524288	131072	855	427	107	53	28	14	11	6	3
12B	4096	262144	65536	1710	855	214	107	56	28	22	11	6
11B	2048	131072	32768	3420	1710	427	214	111	57	45	23	11
2D0 (001)	2000	128000	32000	3503	1748	437	219	114	58	46	23	12
1D6	1600	102400	25600	4373	2190	547	273	143	73	58	29	15
10B	1024	65536	16384	6833	3420	855	427	223	114	90	45	23
1D0 (002)	1000	64000	16000	6998	3503	878	437	228	117	92	46	23
D80	800	51200	12800	8753	4373	1095	547	285	146	115	58	29
09B	512	32768	8192	13673	6833	1710	855	446	228	180	91	46
D50	500	32000	8000	14003	6998	1748	878	457	233	184	93	47
D40 (005)	400	25600	6400	17498 (15975)	8753	2190	1095	571	292	230	116	58
D32	320	20480	5120	21878 (15975)	10935	2738	1365	713	365	288	145	73
08B	256	16384	4096	27345 (15975)	13673	3420	1710	893	456	360	181	91
D20 (010)	200	12800	3200	28086 (15975)	17498 (15975)	4373	2190	1140	583	461	232	117
D16	160	10240	2560	21878 (15975)	10935	2738	1365	713	365	288	145	73
07B	128	8192	2048	28086 (15975)	27345 (15975)	6833	3420	1785	912	720	363	182
D10 (020)	100	6400	1600	28086 (15975)	17498 (15975)	4373	2190	1140	583	461	232	117
D08	80	5120	1280	21878 (15975)	10935	2738	1365	713	365	288	145	73
06B	64	4096	1024	28086 (15975)	28086 (15975)	13673	6833	3570	1823	1439	726	365
D04 (050)	40	2560	640	21878 (15975)	10935	2738	1365	713	365	288	145	73
05B	32	2048	512	28086 (15975)	28086 (15975)	27345 (15975)	13673	7133	3646	2878	1452	730
04B	16	1024	256	n/a	28086 (15975)	28086 (15975)	27345 (15975)	14265	7292	5756	2903	1459
03B	8	512	128	n/a	n/a	28086 (15975)	28086 (15975)	28086 (15975)	14584	11512	5806	2918
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR047B Radial magnetic ring max speed 76 poles without protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	622592	155648	720	360	90	45	23	12	9	5	2
12B	4096	311296	77824	1440	720	180	90	47	24	19	10	5
11B	2048	155648	38912	2880	1440	360	180	94	48	38	19	10
2D0 (001)	2000	152000	38000	2949	1472	368	184	96	49	39	20	10
1D6	1600	121600	30400	3682	1844	461	230	120	61	48	24	12
10B	1024	77824	19456	5754	2880	720	360	188	96	76	38	19
1D0 (002)	1000	76000	19000	5893	2949	739	368	192	98	78	39	20
D80	800	60800	15200	7371	3682	922	461	240	123	97	49	25
09B	512	38912	9728	11514	5754	1440	720	375	192	151	76	38
D50	500	38000	9500	11792	5893	1472	739	384	196	155	78	39
D40 (005)	400	30400	7600	14735 (13453)	7371	1844	922	481	246	194	98	49
D32	320	24320	6080	18423 (13453)	9208	2305	1149	601	307	242	122	61
08B	256	19456	4864	23027 (13453)	11514	2880	1440	752	384	303	153	77
D20 (010)	200	15200	3800	24125 (13453)	14735 (13453)	3682	1844	960	491	388	196	98
D16	160	12160	3040	18423 (13453)	9208	2305	1149	601	307	242	122	61
07B	128	9728	2432	24125 (13453)	23027 (13453)	5754	2880	1503	768	606	306	154
D10 (020)	100	7600	1900	24125 (13453)	14735 (13453)	3682	1844	960	491	388	196	98
D08	80	6080	1520	18423 (13453)	9208	2305	1149	601	307	242	122	61
06B	64	4864	1216	24125 (13453)	24125 (13453)	11514	5754	3006	1535	1212	611	307
D04 (050)	40	3040	760	18423 (13453)	9208	2305	1149	601	307	242	122	61
05B	32	2432	608	24125 (13453)	24125 (13453)	23027 (13453)	11514	6006	3070	2424	1222	614
04B	16	1216	304	n/a	24125 (13453)	24125 (13453)	23027 (13453)	12013	6141	4847	2445	1229
03B	8	608	152	n/a	n/a	24125 (13453)	24125 (13453)	24025 (13453)	12282	9695	4889	2458
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR047B Radial magnetic ring max speed 30 poles without protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr									
13B	8192	245760	61440	1824	911	228	114	59	30	24	12	6
12B	4096	122880	30720	3648	1824	456	228	119	61	48	24	12
11B	2048	61440	15360	7296	3648	911	456	238	122	96	48	24
2D0 (001)	2000	60000	15000	7472	3728	933	467	243	124	98	50	25
1D6	1600	48000	12000	9328	4672	1167	583	304	156	123	62	31
10B	1024	30720	7680	14576	7296	1824	911	476	243	192	97	49
1D0 (002)	1000	30000	7500	14928	7472	1872	933	487	249	196	99	50
D80	800	24000	6000	18672	9328	2336	1167	609	311	246	124	62
09B	512	15360	3840	24125	14576	3648	1824	951	486	384	194	97
D50	500	15000	3750	24125	14928	3728	1872	974	498	393	198	100
D40 (005)	400	12000	3000	24125	18672	4672	2336	1217	622	491	248	124
D32	320	9600	2400	24125	23328	5840	2912	1522	778	614	310	156
08B	256	7680	1920	24125	24125	7296	3648	1904	972	767	387	195
D20 (010)	200	6000	1500	24125	24125	9328	4672	2432	1244	982	496	249
D16	160	4800	1200	24125	23328	5840	2912	1522	778	614	310	156
07B	128	3840	960	24125	24125	14576	7296	3808	1945	1535	774	389
D10 (020)	100	3000	750	24125	24125	9328	4672	2432	1244	982	496	249
D08	80	2400	600	24125	23328	5840	2912	1522	778	614	310	156
06B	64	1920	480	24125	24125	24125	14576	7616	3889	3070	1548	778
D04 (050)	40	1200	300	24125	23328	5840	2912	1522	778	614	310	156
05B	32	960	240	24125	24125	24125	24125	15216	7778	6140	3097	1556
04B	16	480	120	n/a	24125	24125	24125	24125	15557	12280	6193	3113
03B	8	240	60	n/a	n/a	24125	24125	24125	24125	24125	12386	6226
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR050E Radial magnetic ring max speed 80 poles without protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	655360	163840	684	342	85	43	22	11	9	5	2
12B	4096	327680	81920	1368	684	171	85	45	23	18	9	5
11B	2048	163840	40960	2736	1368	342	171	89	46	36	18	9
2D0 (001)	2000	160000	40000	2802	1398	350	175	91	47	37	19	9
1D6	1600	128000	32000	3498	1752	438	219	114	58	46	23	12
10B	1024	81920	20480	5466	2736	684	342	178	91	72	36	18
1D0 (002)	1000	80000	20000	5598	2802	702	350	183	93	74	37	19
D80	800	64000	16000	7002	3498	876	438	228	117	92	46	23
09B	512	40960	10240	10938	5466	1368	684	357	182	144	73	36
D50	500	40000	10000	11202	5598	1398	702	365	187	147	74	37
D40 (005)	400	32000	8000	13998 (12780)	7002	1752	876	457	233	184	93	47
D32	320	25600	6400	17502 (12780)	8748	2190	1092	571	292	230	116	58
08B	256	20480	5120	21876 (12780)	10938	2736	1368	714	365	288	145	73
D20 (010)	200	16000	4000	22873 (12780)	13998 (12780)	3498	1752	912	467	368	186	93
D16	160	12800	3200	17502 (12780)	8748	2190	1092	571	292	230	116	58
07B	128	10240	2560	22873 (12780)	21876 (12780)	5466	2736	1428	729	576	290	146
D10 (020)	100	8000	2000	22873 (12780)	13998 (12780)	3498	1752	912	467	368	186	93
D08	80	6400	1600	17502 (12780)	8748	2190	1092	571	292	230	116	58
06B	64	5120	1280	22873 (12780)	22873 (12780)	10938	5466	2856	1458	1151	581	292
D04 (050)	40	3200	800	17502 (12780)	8748	2190	1092	571	292	230	116	58
05B	32	2560	640	22873 (12780)	22873 (12780)	21876 (12780)	10938	5706	2917	2302	1161	584
04B	16	1280	320	n/a	22873 (12780)	22873 (12780)	21876 (12780)	11412	5834	4605	2322	1167
03B	8	640	160	n/a	n/a	22873 (12780)	22873 (12780)	22824 (12780)	11667	9210	4645	2335
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR050E Radial magnetic ring max speed 80 poles with protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	655360	163840	684	342	85	43	22	11	9	5	2
12B	4096	327680	81920	1368	684	171	85	45	23	18	9	5
11B	2048	163840	40960	2736	1368	342	171	89	46	36	18	9
2D0 (001)	2000	160000	40000	2802	1398	350	175	91	47	37	19	9
1D6	1600	128000	32000	3498	1752	438	219	114	58	46	23	12
10B	1024	81920	20480	5466	2736	684	342	178	91	72	36	18
1D0 (002)	1000	80000	20000	5598	2802	702	350	183	93	74	37	19
D80	800	64000	16000	7002	3498	876	438	228	117	92	46	23
09B	512	40960	10240	10938	5466	1368	684	357	182	144	73	36
D50	500	40000	10000	11202	5598	1398	702	365	187	147	74	37
D40 (005)	400	32000	8000	13998 (12780)	7002	1752	876	457	233	184	93	47
D32	320	25600	6400	17502 (12780)	8748	2190	1092	571	292	230	116	58
08B	256	20480	5120	21876 (12780)	10938	2736	1368	714	365	288	145	73
D20 (010)	200	16000	4000	28002 (12780)	13998 (12780)	3498	1752	912	467	368	186	93
D16	160	12800	3200	17502 (12780)	8748	2190	1092	571	292	230	116	58
07B	128	10240	2560	43752 (12780)	21876 (12780)	5466	2736	1428	729	576	290	146
D10 (020)	100	8000	2000	28002 (12780)	13998 (12780)	3498	1752	912	467	368	186	93
D08	80	6400	1600	17502 (12780)	8748	2190	1092	571	292	230	116	58
06B	64	5120	1280	47918 (12780)	43752 (12780)	10938	5466	2856	1458	1151	581	292
D04 (050)	40	3200	800	17502 (12780)	8748	2190	1092	571	292	230	116	58
05B	32	2560	640	47918 (12780)	47918 (12780)	21876 (12780)	10938	5706	2917	2302	1161	584
04B	16	1280	320	n/a	47918 (12780)	43752 (12780)	21876 (12780)	11412	5834	4605	2322	1167
03B	8	640	160	n/a	n/a	47918 (12780)	43752 (12780)	22824 (12780)	11667	9210	4645	2335
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR050E Radial magnetic ring max speed 32 poles without protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr									
13B	8192	262144	65536	1710	854	214	107	56	28	22	11	6
12B	4096	131072	32768	3420	1710	427	214	111	57	45	23	11
11B	2048	65536	16384	6840	3420	854	427	223	114	90	45	23
2D0 (001)	2000	64000	16000	7005	3495	875	438	228	117	92	46	23
1D6	1600	51200	12800	8745	4380	1094	547	285	146	115	58	29
10B	1024	32768	8192	13665	6840	1710	854	446	228	180	91	46
1D0 (002)	1000	32000	8000	13995	7005	1755	875	457	233	184	93	47
D80	800	25600	6400	17505	8745	2190	1094	571	292	230	116	58
09B	512	16384	4096	22873	13665	3420	1710	892	456	360	181	91
D50	500	16000	4000	22873	13995	3495	1755	913	467	368	186	93
D40 (005)	400	12800	3200	22873	17505	4380	2190	1141	583	461	232	117
D32	320	10240	2560	22873	21870	5475	2730	1427	729	576	290	146
08B	256	8192	2048	22873	22873	6840	3420	1785	912	720	363	182
D20 (010)	200	6400	1600	22873	22873	8745	4380	2280	1167	921	465	233
D16	160	5120	1280	22873	21870	5475	2730	1427	729	576	290	146
07B	128	4096	1024	22873	22873	13665	6840	3570	1823	1439	726	365
D10 (020)	100	3200	800	22873	22873	8745	4380	2280	1167	921	465	233
D08	80	2560	640	22873	21870	5475	2730	1427	729	576	290	146
06B	64	2048	512	22873	22873	22873	13665	7140	3646	2878	1452	730
D04 (050)	40	1280	320	22873	21870	5475	2730	1427	729	576	290	146
05B	32	1024	256	22873	22873	22873	22873	14265	7292	5756	2903	1459
04B	16	512	128	n/a	22873	22873	22873	22873	14584	11512	5806	2918
03B	8	256	64	n/a	n/a	22873	22873	22873	22873	22873	11612	5837
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR050E Radial magnetic ring max speed 32 poles with protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr									
13B	8192	262144	65536	1710	854	214	107	56	28	22	11	6
12B	4096	131072	32768	3420	1710	427	214	111	57	45	23	11
11B	2048	65536	16384	6840	3420	854	427	223	114	90	45	23
2D0 (001)	2000	64000	16000	7005	3495	875	438	228	117	92	46	23
1D6	1600	51200	12800	8745	4380	1094	547	285	146	115	58	29
10B	1024	32768	8192	13665	6840	1710	854	446	228	180	91	46
1D0 (002)	1000	32000	8000	13995	7005	1755	875	457	233	184	93	47
D80	800	25600	6400	17505	8745	2190	1094	571	292	230	116	58
09B	512	16384	4096	27345	13665	3420	1710	892	456	360	181	91
D50	500	16000	4000	28005	13995	3495	1755	913	467	368	186	93
D40 (005)	400	12800	3200	34995	17505	4380	2190	1141	583	461	232	117
D32	320	10240	2560	43755	21870	5475	2730	1427	729	576	290	146
08B	256	8192	2048	47918	27345	6840	3420	1785	912	720	363	182
D20 (010)	200	6400	1600	47918	34995	8745	4380	2280	1167	921	465	233
D16	160	5120	1280	43755	21870	5475	2730	1427	729	576	290	146
07B	128	4096	1024	47918	47918	13665	6840	3570	1823	1439	726	365
D10 (020)	100	3200	800	47918	34995	8745	4380	2280	1167	921	465	233
D08	80	2560	640	43755	21870	5475	2730	1427	729	576	290	146
06B	64	2048	512	47918	47918	27345	13665	7140	3646	2878	1452	730
D04 (050)	40	1280	320	43755	21870	5475	2730	1427	729	576	290	146
05B	32	1024	256	47918	47918	47918	27345	14265	7292	5756	2903	1459
04B	16	512	128	n/a	47918	47918	47918	28530	14584	11512	5806	2918
03B	8	256	64	n/a	n/a	47918	47918	47918	29169	23025	11612	5837
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR057E Radial magnetic ring max speed 90 poles without protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	737280	184320	608	304	76	38	20	10	8	4	2
12B	4096	368640	92160	1216	608	152	76	40	20	16	8	4
11B	2048	184320	46080	2432	1216	304	152	79	41	32	16	8
2D0 (001)	2000	180000	45000	2491	1243	311	156	81	41	33	17	8
1D6	1600	144000	36000	3109	1557	389	194	101	52	41	21	10
10B	1024	92160	23040	4859	2432	608	304	159	81	64	32	16
1D0 (002)	1000	90000	22500	4976	2491	624	311	162	83	65	33	17
D80	800	72000	18000	6224	3109	779	389	203	104	82	41	21
09B	512	46080	11520	9723	4859	1216	608	317	162	128	65	32
D50	500	45000	11250	9957	4976	1243	624	325	166	131	66	33
D40 (005)	400	36000	9000	12443 (11360)	6224	1557	779	406	207	164	83	41
D32	320	28800	7200	15557 (11360)	7776	1947	971	507	259	205	103	52
08B	256	23040	5760	19445 (11360)	9723	2432	1216	635	324	256	129	65
D20 (010)	200	18000	4500	19999 (11360)	12443 (11360)	3109	1557	811	415	327	165	83
D16	160	14400	3600	15557 (11360)	7776	1947	971	507	259	205	103	52
07B	128	11520	2880	19999 (11360)	19445 (11360)	4859	2432	1269	648	512	258	130
D10 (020)	100	9000	2250	19999 (11360)	12443 (11360)	3109	1557	811	415	327	165	83
D08	80	7200	1800	15557 (11360)	7776	1947	971	507	259	205	103	52
06B	64	5760	1440	19999 (11360)	19999 (11360)	9723	4859	2539	1296	1023	516	259
D04 (050)	40	3600	900	15557 (11360)	7776	1947	971	507	259	205	103	52
05B	32	2880	720	19999 (11360)	19999 (11360)	19445 (11360)	9723	5072	2593	2047	1032	519
04B	16	1440	360	n/a	19999 (11360)	19999 (11360)	19445 (11360)	10144	5186	4093	2064	1038
03B	8	720	180	n/a	n/a	19999 (11360)	19999 (11360)	19999 (11360)	10371	8187	4129	2075
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR057E Radial magnetic ring max speed 90 poles with protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	737280	184320	608	304	76	38	20	10	8	4	2
12B	4096	368640	92160	1216	608	152	76	40	20	16	8	4
11B	2048	184320	46080	2432	1216	304	152	79	41	32	16	8
2D0 (001)	2000	180000	45000	2491	1243	311	156	81	41	33	17	8
1D6	1600	144000	36000	3109	1557	389	194	101	52	41	21	10
10B	1024	92160	23040	4859	2432	608	304	159	81	64	32	16
1D0 (002)	1000	90000	22500	4976	2491	624	311	162	83	65	33	17
D80	800	72000	18000	6224	3109	779	389	203	104	82	41	21
09B	512	46080	11520	9723	4859	1216	608	317	162	128	65	32
D50	500	45000	11250	9957	4976	1243	624	325	166	131	66	33
D40 (005)	400	36000	9000	12443 (11360)	6224	1557	779	406	207	164	83	41
D32	320	28800	7200	15557 (11360)	7776	1947	971	507	259	205	103	52
08B	256	23040	5760	19445 (11360)	9723	2432	1216	635	324	256	129	65
D20 (010)	200	18000	4500	24891 (11360)	12443 (11360)	3109	1557	811	415	327	165	83
D16	160	14400	3600	15557 (11360)	7776	1947	971	507	259	205	103	52
07B	128	11520	2880	38891 (11360)	19445 (11360)	4859	2432	1269	648	512	258	130
D10 (020)	100	9000	2250	24891 (11360)	12443 (11360)	3109	1557	811	415	327	165	83
D08	80	7200	1800	15557 (11360)	7776	1947	971	507	259	205	103	52
06B	64	5760	1440	41897 (11360)	38891 (11360)	9723	4859	2539	1296	1023	516	259
D04 (050)	40	3600	900	15557 (11360)	7776	1947	971	507	259	205	103	52
05B	32	2880	720	41897 (11360)	41897 (11360)	19445 (11360)	9723	5072	2593	2047	1032	519
04B	16	1440	360	n/a	41897 (11360)	38891 (11360)	19445 (11360)	10144	5186	4093	2064	1038
03B	8	720	180	n/a	n/a	41897 (11360)	38891 (11360)	20288 (11360)	10371	8187	4129	2075
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR057E Radial magnetic ring max speed 36 poles without protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	1520	760	190	95	50	25	20	10	5
13B	8192	294912	73728	1520	760	190	95	50	25	20	10	5
12B	4096	147456	36864	3040	1520	380	190	99	51	40	20	10
11B	2048	73728	18432	6080	3040	760	380	198	101	80	40	20
2D0 (001)	2000	72000	18000	6227	3107	778	389	203	104	82	41	21
1D6	1600	57600	14400	7773	3893	972	486	254	130	102	52	26
10B	1024	36864	9216	12147	6080	1520	760	396	203	160	81	41
1D0 (002)	1000	36000	9000	12440	6227	1560	778	406	207	164	83	41
D80	800	28800	7200	15560	7773	1947	972	507	259	205	103	52
09B	512	18432	4608	19999	12147	3040	1520	793	405	320	161	81
D50	500	18000	4500	19999	12440	3107	1560	812	415	327	165	83
D40 (005)	400	14400	3600	19999	15560	3893	1947	1014	519	409	206	104
D32	320	11520	2880	19999	19440	4867	2427	1268	648	512	258	130
08B	256	9216	2304	19999	19999	6080	3040	1587	810	640	323	162
D20 (010)	200	7200	1800	19999	19999	7773	3893	2027	1037	819	413	207
D16	160	5760	1440	19999	19440	4867	2427	1268	648	512	258	130
07B	128	4608	1152	19999	19999	12147	6080	3173	1620	1279	645	324
D10 (020)	100	3600	900	19999	19999	7773	3893	2027	1037	819	413	207
D08	80	2880	720	19999	19440	4867	2427	1268	648	512	258	130
06B	64	2304	576	19999	19999	19999	12147	6347	3241	2558	1290	649
D04 (050)	40	1440	360	19999	19440	4867	2427	1268	648	512	258	130
05B	32	1152	288	19999	19999	19999	19999	12680	6482	5117	2580	1297
04B	16	576	144	n/a	19999	19999	19999	19999	12964	10233	5161	2594
03B	8	288	72	n/a	n/a	19999	19999	19999	19999	19999	10322	5188
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR057E Radial magnetic ring max speed 36 poles with protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	1520	760	190	95	50	25	20	10	5
13B	8192	294912	73728	1520	760	190	95	50	25	20	10	5
12B	4096	147456	36864	3040	1520	380	190	99	51	40	20	10
11B	2048	73728	18432	6080	3040	760	380	198	101	80	40	20
2D0 (001)	2000	72000	18000	6227	3107	778	389	203	104	82	41	21
1D6	1600	57600	14400	7773	3893	972	486	254	130	102	52	26
10B	1024	36864	9216	12147	6080	1520	760	396	203	160	81	41
1D0 (002)	1000	36000	9000	12440	6227	1560	778	406	207	164	83	41
D80	800	28800	7200	15560	7773	1947	972	507	259	205	103	52
09B	512	18432	4608	24307	12147	3040	1520	793	405	320	161	81
D50	500	18000	4500	24893	12440	3107	1560	812	415	327	165	83
D40 (005)	400	14400	3600	31107	15560	3893	1947	1014	519	409	206	104
D32	320	11520	2880	38893	19440	4867	2427	1268	648	512	258	130
08B	256	9216	2304	41897	24307	6080	3040	1587	810	640	323	162
D20 (010)	200	7200	1800	41897	31107	7773	3893	2027	1037	819	413	207
D16	160	5760	1440	38893	19440	4867	2427	1268	648	512	258	130
07B	128	4608	1152	41897	41897	12147	6080	3173	1620	1279	645	324
D10 (020)	100	3600	900	41897	31107	7773	3893	2027	1037	819	413	207
D08	80	2880	720	38893	19440	4867	2427	1268	648	512	258	130
06B	64	2304	576	41897	41897	24307	12147	6347	3241	2558	1290	649
D04 (050)	40	1440	360	38893	19440	4867	2427	1268	648	512	258	130
05B	32	1152	288	41897	41897	41897	24307	12680	6482	5117	2580	1297
04B	16	576	144	n/a	41897	41897	41897	25360	12964	10233	5161	2594
03B	8	288	72	n/a	n/a	41897	41897	41897	25928	20466	10322	5188
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR057R Radial magnetic ring max speed 90 poles without protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	737280	184320	608	304	76	38	20	10	8	4	2
12B	4096	368640	92160	1216	608	152	76	40	20	16	8	4
11B	2048	184320	46080	2432	1216	304	152	79	41	32	16	8
2D0 (001)	2000	180000	45000	2491	1243	311	156	81	41	33	17	8
1D6	1600	144000	36000	3109	1557	389	194	101	52	41	21	10
10B	1024	92160	23040	4859	2432	608	304	159	81	64	32	16
1D0 (002)	1000	90000	22500	4976	2491	624	311	162	83	65	33	17
D80	800	72000	18000	6224	3109	779	389	203	104	82	41	21
09B	512	46080	11520	9723	4859	1216	608	317	162	128	65	32
D50	500	45000	11250	9957	4976	1243	624	325	166	131	66	33
D40 (005)	400	36000	9000	12443 (11360)	6224	1557	779	406	207	164	83	41
D32	320	28800	7200	15557 (11360)	7776	1947	971	507	259	205	103	52
08B	256	23040	5760	19445 (11360)	9723	2432	1216	635	324	256	129	65
D20 (010)	200	18000	4500	19929 (11360)	12443 (11360)	3109	1557	811	415	327	165	83
D16	160	14400	3600	15557 (11360)	7776	1947	971	507	259	205	103	52
07B	128	11520	2880	19929 (11360)	19445 (11360)	4859	2432	1269	648	512	258	130
D10 (020)	100	9000	2250	19929 (11360)	12443 (11360)	3109	1557	811	415	327	165	83
D08	80	7200	1800	15557 (11360)	7776	1947	971	507	259	205	103	52
06B	64	5760	1440	19929 (11360)	19929 (11360)	9723	4859	2539	1296	1023	516	259
D04 (050)	40	3600	900	15557 (11360)	7776	1947	971	507	259	205	103	52
05B	32	2880	720	19929 (11360)	19929 (11360)	19445 (11360)	9723	5072	2593	2047	1032	519
04B	16	1440	360	n/a	19929 (11360)	19929 (11360)	19445 (11360)	10144	5186	4093	2064	1038
03B	8	720	180	n/a	n/a	19929 (11360)	19929 (11360)	19929 (11360)	10371	8187	4129	2075
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR057R Radial magnetic ring max speed 90 poles with protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	737280	184320	608	304	76	38	20	10	8	4	2
12B	4096	368640	92160	1216	608	152	76	40	20	16	8	4
11B	2048	184320	46080	2432	1216	304	152	79	41	32	16	8
2D0 (001)	2000	180000	45000	2491	1243	311	156	81	41	33	17	8
1D6	1600	144000	36000	3109	1557	389	194	101	52	41	21	10
10B	1024	92160	23040	4859	2432	608	304	159	81	64	32	16
1D0 (002)	1000	90000	22500	4976	2491	624	311	162	83	65	33	17
D80	800	72000	18000	6224	3109	779	389	203	104	82	41	21
09B	512	46080	11520	9723	4859	1216	608	317	162	128	65	32
D50	500	45000	11250	9957	4976	1243	624	325	166	131	66	33
D40 (005)	400	36000	9000	12443 (11360)	6224	1557	779	406	207	164	83	41
D32	320	28800	7200	15557 (11360)	7776	1947	971	507	259	205	103	52
08B	256	23040	5760	19445 (11360)	9723	2432	1216	635	324	256	129	65
D20 (010)	200	18000	4500	24891 (11360)	12443 (11360)	3109	1557	811	415	327	165	83
D16	160	14400	3600	15557 (11360)	7776	1947	971	507	259	205	103	52
07B	128	11520	2880	38891 (11360)	19445 (11360)	4859	2432	1269	648	512	258	130
D10 (020)	100	9000	2250	24891 (11360)	12443 (11360)	3109	1557	811	415	327	165	83
D08	80	7200	1800	15557 (11360)	7776	1947	971	507	259	205	103	52
06B	64	5760	1440	41751 (11360)	38891 (11360)	9723	4859	2539	1296	1023	516	259
D04 (050)	40	3600	900	15557 (11360)	7776	1947	971	507	259	205	103	52
05B	32	2880	720	41751 (11360)	41751 (11360)	19445 (11360)	9723	5072	2593	2047	1032	519
04B	16	1440	360	n/a	41751 (11360)	38891 (11360)	19445 (11360)	10144	5186	4093	2064	1038
03B	8	720	180	n/a	n/a	41751 (11360)	38891 (11360)	20288 (11360)	10371	8187	4129	2075
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR075E Radial magnetic ring max speed 120 poles without protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	983040	245760	456	228	57	28	15	8	6	3	2
12B	4096	491520	122880	912	456	114	57	30	15	12	6	3
11B	2048	245760	61440	1824	912	228	114	59	30	24	12	6
2D0 (001)	2000	240000	60000	1868	932	233	117	61	31	25	12	6
1D6	1600	192000	48000	2332	1168	292	146	76	39	31	15	8
10B	1024	122880	30720	3644	1824	456	228	119	61	48	24	12
1D0 (002)	1000	120000	30000	3732	1868	468	233	122	62	49	25	12
D80	800	96000	24000	4668	2332	584	292	152	78	61	31	16
09B	512	61440	15360	7292	3644	912	456	238	122	96	48	24
D50	500	60000	15000	7468	3732	932	468	243	124	98	50	25
D40 (005)	400	48000	12000	9332 (8520)	4668	1168	584	304	156	123	62	31
D32	320	38400	9600	11668 (8520)	5832	1460	728	380	194	154	77	39
08B	256	30720	7680	14584 (8520)	7292	1824	912	476	243	192	97	49
D20 (010)	200	24000	6000	15198 (8520)	9332 (8520)	2332	1168	608	311	246	124	62
D16	160	19200	4800	11668 (8520)	5832	1460	728	380	194	154	77	39
07B	128	15360	3840	15198 (8520)	14584 (8520)	3644	1824	952	486	384	194	97
D10 (020)	100	12000	3000	15198 (8520)	9332 (8520)	2332	1168	608	311	246	124	62
D08	80	9600	2400	11668 (8520)	5832	1460	728	380	194	154	77	39
06B	64	7680	1920	15198 (8520)	15198 (8520)	7292	3644	1904	972	767	387	195
D04 (050)	40	4800	1200	11668 (8520)	5832	1460	728	380	194	154	77	39
05B	32	3840	960	15198 (8520)	15198 (8520)	14584 (8520)	7292	3804	1945	1535	774	389
04B	16	1920	480	n/a	15198 (8520)	15198 (8520)	14584 (8520)	7608	3889	3070	1548	778
03B	8	960	240	n/a	n/a	15198 (8520)	15198 (8520)	15198 (8520)	7778	6140	3097	1556
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR075E Radial magnetic ring max speed 120 poles with protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	983040	245760	456	228	57	28	15	8	6	3	2
12B	4096	491520	122880	912	456	114	57	30	15	12	6	3
11B	2048	245760	61440	1824	912	228	114	59	30	24	12	6
2D0 (001)	2000	240000	60000	1868	932	233	117	61	31	25	12	6
1D6	1600	192000	48000	2332	1168	292	146	76	39	31	15	8
10B	1024	122880	30720	3644	1824	456	228	119	61	48	24	12
1D0 (002)	1000	120000	30000	3732	1868	468	233	122	62	49	25	12
D80	800	96000	24000	4668	2332	584	292	152	78	61	31	16
09B	512	61440	15360	7292	3644	912	456	238	122	96	48	24
D50	500	60000	15000	7468	3732	932	468	243	124	98	50	25
D40 (005)	400	48000	12000	9332 (8520)	4668	1168	584	304	156	123	62	31
D32	320	38400	9600	11668 (8520)	5832	1460	728	380	194	154	77	39
08B	256	30720	7680	14584 (8520)	7292	1824	912	476	243	192	97	49
D20 (010)	200	24000	6000	18668 (8520)	9332 (8520)	2332	1168	608	311	246	124	62
D16	160	19200	4800	11668 (8520)	5832	1460	728	380	194	154	77	39
07B	128	15360	3840	29168 (8520)	14584 (8520)	3644	1824	952	486	384	194	97
D10 (020)	100	12000	3000	18668 (8520)	9332 (8520)	2332	1168	608	311	246	124	62
D08	80	9600	2400	11668 (8520)	5832	1460	728	380	194	154	77	39
06B	64	7680	1920	31839 (8520)	29168 (8520)	7292	3644	1904	972	767	387	195
D04 (050)	40	4800	1200	11668 (8520)	5832	1460	728	380	194	154	77	39
05B	32	3840	960	31839 (8520)	31839 (8520)	14584 (8520)	7292	3804	1945	1535	774	389
04B	16	1920	480	n/a	31839 (8520)	29168 (8520)	14584 (8520)	7608	3889	3070	1548	778
03B	8	960	240	n/a	n/a	31839 (8520)	29168 (8520)	15216 (8520)	7778	6140	3097	1556
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR075E Radial magnetic ring max speed 48 poles without protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr									
13B	8192	393216	98304	1140	570	142	71	37	19	15	8	4
12B	4096	196608	49152	2280	1140	285	142	74	38	30	15	8
11B	2048	98304	24576	4560	2280	570	285	149	76	60	30	15
2D0 (001)	2000	96000	24000	4670	2330	583	292	152	78	61	31	16
1D6	1600	76800	19200	5830	2920	729	365	190	97	77	39	19
10B	1024	49152	12288	9110	4560	1140	570	297	152	120	60	30
1D0 (002)	1000	48000	12000	9330	4670	1170	583	304	156	123	62	31
D80	800	38400	9600	11670	5830	1460	729	380	194	154	77	39
09B	512	24576	6144	15198	9110	2280	1140	594	304	240	121	61
D50	500	24000	6000	15198	9330	2330	1170	609	311	246	124	62
D40 (005)	400	19200	4800	15198	11670	2920	1460	761	389	307	155	78
D32	320	15360	3840	15198	14580	3650	1820	951	486	384	194	97
08B	256	12288	3072	15198	15198	4560	2280	1190	608	480	242	122
D20 (010)	200	9600	2400	15198	15198	5830	2920	1520	778	614	310	156
D16	160	7680	1920	15198	14580	3650	1820	951	486	384	194	97
07B	128	6144	1536	15198	15198	9110	4560	2380	1215	959	484	243
D10 (020)	100	4800	1200	15198	15198	5830	2920	1520	778	614	310	156
D08	80	3840	960	15198	14580	3650	1820	951	486	384	194	97
06B	64	3072	768	15198	15198	15198	9110	4760	2431	1919	968	486
D04 (050)	40	1920	480	15198	14580	3650	1820	951	486	384	194	97
05B	32	1536	384	15198	15198	15198	15198	9510	4861	3837	1935	973
04B	16	768	192	n/a	15198	15198	15198	15198	9723	7675	3871	1946
03B	8	384	96	n/a	n/a	15198	15198	15198	15198	15198	7741	3891
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR075E Radial magnetic ring max speed 48 poles with protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr									
13B	8192	393216	98304	1140	570	142	71	37	19	15	8	4
12B	4096	196608	49152	2280	1140	285	142	74	38	30	15	8
11B	2048	98304	24576	4560	2280	570	285	149	76	60	30	15
2D0 (001)	2000	96000	24000	4670	2330	583	292	152	78	61	31	16
1D6	1600	76800	19200	5830	2920	729	365	190	97	77	39	19
10B	1024	49152	12288	9110	4560	1140	570	297	152	120	60	30
1D0 (002)	1000	48000	12000	9330	4670	1170	583	304	156	123	62	31
D80	800	38400	9600	11670	5830	1460	729	380	194	154	77	39
09B	512	24576	6144	18230	9110	2280	1140	594	304	240	121	61
D50	500	24000	6000	18670	9330	2330	1170	609	311	246	124	62
D40 (005)	400	19200	4800	23330	11670	2920	1460	761	389	307	155	78
D32	320	15360	3840	29170	14580	3650	1820	951	486	384	194	97
08B	256	12288	3072	31839	18230	4560	2280	1190	608	480	242	122
D20 (010)	200	9600	2400	31839	23330	5830	2920	1520	778	614	310	156
D16	160	7680	1920	29170	14580	3650	1820	951	486	384	194	97
07B	128	6144	1536	31839	31839	9110	4560	2380	1215	959	484	243
D10 (020)	100	4800	1200	31839	23330	5830	2920	1520	778	614	310	156
D08	80	3840	960	29170	14580	3650	1820	951	486	384	194	97
06B	64	3072	768	31839	31839	18230	9110	4760	2431	1919	968	486
D04 (050)	40	1920	480	29170	14580	3650	1820	951	486	384	194	97
05B	32	1536	384	31839	31839	31839	18230	9510	4861	3837	1935	973
04B	16	768	192	n/a	31839	31839	31839	19020	9723	7675	3871	1946
03B	8	384	96	n/a	n/a	31839	31839	31839	19446	15350	7741	3891
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR080R Radial magnetic ring max speed 128 poles without protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	1048576	262144	428	214	53	27	14	7	6	3	1
12B	4096	524288	131072	855	428	107	53	28	14	11	6	3
11B	2048	262144	65536	1710	855	214	107	56	28	22	11	6
2D0 (001)	2000	256000	64000	1751	874	219	109	57	29	23	12	6
1D6	1600	204800	51200	2186	1095	273	137	71	36	29	15	7
10B	1024	131072	32768	3416	1710	428	214	111	57	45	23	11
1D0 (002)	1000	128000	32000	3499	1751	439	219	114	58	46	23	12
D80	800	102400	25600	4376	2186	548	273	143	73	58	29	15
09B	512	65536	16384	6836	3416	855	428	223	114	90	45	23
D50	500	64000	16000	7001	3499	874	439	228	117	92	46	23
D40 (005)	400	51200	12800	8749 (7988)	4376	1095	548	285	146	115	58	29
D32	320	40960	10240	10939 (7988)	5468	1369	683	357	182	144	73	36
08B	256	32768	8192	13673 (7988)	6836	1710	855	446	228	180	91	46
D20 (010)	200	25600	6400	14270 (7988)	8749 (7988)	2186	1095	570	292	230	116	58
D16	160	20480	5120	10939 (7988)	5468	1369	683	357	182	144	73	36
07B	128	16384	4096	14270 (7988)	13673 (7988)	3416	1710	893	456	360	181	91
D10 (020)	100	12800	3200	14270 (7988)	8749 (7988)	2186	1095	570	292	230	116	58
D08	80	10240	2560	10939 (7988)	5468	1369	683	357	182	144	73	36
06B	64	8192	2048	14270 (7988)	14270 (7988)	6836	3416	1785	912	720	363	182
D04 (050)	40	5120	1280	10939 (7988)	5468	1369	683	357	182	144	73	36
05B	32	4096	1024	14270 (7988)	14270 (7988)	13673 (7988)	6836	3566	1823	1439	726	365
04B	16	2048	512	n/a	14270 (7988)	14270 (7988)	13673 (7988)	7133	3646	2878	1452	730
03B	8	1024	256	n/a	n/a	14270 (7988)	14270 (7988)	14265 (7988)	7292	5756	2903	1459
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR080R Radial magnetic ring max speed 128 poles with protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	1048576	262144	428	214	53	27	14	7	6	3	1
12B	4096	524288	131072	855	428	107	53	28	14	11	6	3
11B	2048	262144	65536	1710	855	214	107	56	28	22	11	6
2D0 (001)	2000	256000	64000	1751	874	219	109	57	29	23	12	6
1D6	1600	204800	51200	2186	1095	273	137	71	36	29	15	7
10B	1024	131072	32768	3416	1710	428	214	111	57	45	23	11
1D0 (002)	1000	128000	32000	3499	1751	439	219	114	58	46	23	12
D80	800	102400	25600	4376	2186	548	273	143	73	58	29	15
09B	512	65536	16384	6836	3416	855	428	223	114	90	45	23
D50	500	64000	16000	7001	3499	874	439	228	117	92	46	23
D40 (005)	400	51200	12800	8749 (7988)	4376	1095	548	285	146	115	58	29
D32	320	40960	10240	10939 (7988)	5468	1369	683	357	182	144	73	36
08B	256	32768	8192	13673 (7988)	6836	1710	855	446	228	180	91	46
D20 (010)	200	25600	6400	17501 (7988)	8749 (7988)	2186	1095	570	292	230	116	58
D16	160	20480	5120	10939 (7988)	5468	1369	683	357	182	144	73	36
07B	128	16384	4096	27345 (7988)	13673 (7988)	3416	1710	893	456	360	181	91
D10 (020)	100	12800	3200	17501 (7988)	8749 (7988)	2186	1095	570	292	230	116	58
D08	80	10240	2560	10939 (7988)	5468	1369	683	357	182	144	73	36
06B	64	8192	2048	29897 (7988)	27345 (7988)	6836	3416	1785	912	720	363	182
D04 (050)	40	5120	1280	10939 (7988)	5468	1369	683	357	182	144	73	36
05B	32	4096	1024	29897 (7988)	29897 (7988)	13673 (7988)	6836	3566	1823	1439	726	365
04B	16	2048	512	n/a	29897 (7988)	27345 (7988)	13673 (7988)	7133	3646	2878	1452	730
03B	8	1024	256	n/a	n/a	29897 (7988)	27345 (7988)	14265 (7988)	7292	5756	2903	1459
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR100F Radial magnetic ring max speed 160 poles without protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	1310720	327680	342	171	43	21	11	6	4	2	1
12B	4096	655360	163840	684	342	85	43	22	11	9	5	2
11B	2048	327680	81920	1368	684	171	85	45	23	18	9	5
2D0 (001)	2000	320000	80000	1401	699	175	88	46	23	18	9	5
1D6	1600	256000	64000	1749	876	219	109	57	29	23	12	6
10B	1024	163840	40960	2733	1368	342	171	89	46	36	18	9
1D0 (002)	1000	160000	40000	2799	1401	351	175	91	47	37	19	9
D80	800	128000	32000	3501	1749	438	219	114	58	46	23	12
09B	512	81920	20480	5469	2733	684	342	178	91	72	36	18
D50	500	80000	20000	5601	2799	699	351	183	93	74	37	19
D40 (005)	400	64000	16000	6999 (6390)	3501	876	438	228	117	92	46	23
D32	320	51200	12800	8751 (6390)	4374	1095	546	285	146	115	58	29
08B	256	40960	10240	10938 (6390)	5469	1368	684	357	182	144	73	36
D20 (010)	200	32000	8000	11402 (6390)	6999 (6390)	1749	876	456	233	184	93	47
D16	160	25600	6400	8751 (6390)	4374	1095	546	285	146	115	58	29
07B	128	20480	5120	11402 (6390)	10938 (6390)	2733	1368	714	365	288	145	73
D10 (020)	100	16000	4000	11402 (6390)	6999 (6390)	1749	876	456	233	184	93	47
D08	80	12800	3200	8751 (6390)	4374	1095	546	285	146	115	58	29
06B	64	10240	2560	11402 (6390)	11402 (6390)	5469	2733	1428	729	576	290	146
D04 (050)	40	6400	1600	8751 (6390)	4374	1095	546	285	146	115	58	29
05B	32	5120	1280	11402 (6390)	11402 (6390)	10938 (6390)	5469	2853	1458	1151	581	292
04B	16	2560	640	n/a	11402 (6390)	11402 (6390)	10938 (6390)	5706	2917	2302	1161	584
03B	8	1280	320	n/a	n/a	11402 (6390)	11402 (6390)	11402 (6390)	5834	4605	2322	1167
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR100F Radial magnetic ring max speed 160 poles with protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	1310720	327680	342	171	43	21	11	6	4	2	1
12B	4096	655360	163840	684	342	85	43	22	11	9	5	2
11B	2048	327680	81920	1368	684	171	85	45	23	18	9	5
2D0 (001)	2000	320000	80000	1401	699	175	88	46	23	18	9	5
1D6	1600	256000	64000	1749	876	219	109	57	29	23	12	6
10B	1024	163840	40960	2733	1368	342	171	89	46	36	18	9
1D0 (002)	1000	160000	40000	2799	1401	351	175	91	47	37	19	9
D80	800	128000	32000	3501	1749	438	219	114	58	46	23	12
09B	512	81920	20480	5469	2733	684	342	178	91	72	36	18
D50	500	80000	20000	5601	2799	699	351	183	93	74	37	19
D40 (005)	400	64000	16000	6999 (6390)	3501	876	438	228	117	92	46	23
D32	320	51200	12800	8751 (6390)	4374	1095	546	285	146	115	58	29
08B	256	40960	10240	10938 (6390)	5469	1368	684	357	182	144	73	36
D20 (010)	200	32000	8000	14001 (6390)	6999 (6390)	1749	876	456	233	184	93	47
D16	160	25600	6400	8751 (6390)	4374	1095	546	285	146	115	58	29
07B	128	20480	5120	21876 (6390)	10938 (6390)	2733	1368	714	365	288	145	73
D10 (020)	100	16000	4000	14001 (6390)	6999 (6390)	1749	876	456	233	184	93	47
D08	80	12800	3200	8751 (6390)	4374	1095	546	285	146	115	58	29
06B	64	10240	2560	23887 (6390)	21876 (6390)	5469	2733	1428	729	576	290	146
D04 (050)	40	6400	1600	8751 (6390)	4374	1095	546	285	146	115	58	29
05B	32	5120	1280	23887 (6390)	23887 (6390)	10938 (6390)	5469	2853	1458	1151	581	292
04B	16	2560	640	n/a	23887 (6390)	21876 (6390)	10938 (6390)	5706	2917	2302	1161	584
03B	8	1280	320	n/a	n/a	23887 (6390)	21876 (6390)	11412 (6390)	5834	4605	2322	1167
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR122E Radial magnetic ring max speed 194 poles without protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	1589248	397312	282	141	35	18	9	5	4	2	1
12B	4096	794624	198656	564	282	70	35	18	9	7	4	2
11B	2048	397312	99328	1128	564	141	70	37	19	15	7	4
2D0 (001)	2000	388000	97000	1155	576	144	72	38	19	15	8	4
1D6	1600	310400	77600	1442	722	180	90	47	24	19	10	5
10B	1024	198656	49664	2254	1128	282	141	74	38	30	15	8
1D0 (002)	1000	194000	48500	2308	1155	289	144	75	38	30	15	8
D80	800	155200	38800	2887	1442	361	180	94	48	38	19	10
09B	512	99328	24832	4511	2254	564	282	147	75	59	30	15
D50	500	97000	24250	4619	2308	576	289	151	77	61	31	15
D40 (005)	400	77600	19400	5772 (5270)	2887	722	361	188	96	76	38	19
D32	320	62080	15520	7217 (5270)	3607	903	450	235	120	95	48	24
08B	256	49664	12416	9021 (5270)	4511	1128	564	294	150	119	60	30
D20 (010)	200	38800	9700	9393 (5270)	5772 (5270)	1442	722	376	192	152	77	38
D16	160	31040	7760	7217 (5270)	3607	903	450	235	120	95	48	24
07B	128	24832	6208	9393 (5270)	9021 (5270)	2254	1128	589	301	237	120	60
D10 (020)	100	19400	4850	9393 (5270)	5772 (5270)	1442	722	376	192	152	77	38
D08	80	15520	3880	7217 (5270)	3607	903	450	235	120	95	48	24
06B	64	12416	3104	9393 (5270)	9393 (5270)	4511	2254	1178	601	475	239	120
D04 (050)	40	7760	1940	7217 (5270)	3607	903	450	235	120	95	48	24
05B	32	6208	1552	9393 (5270)	9393 (5270)	9021 (5270)	4511	2353	1203	949	479	241
04B	16	3104	776	n/a	9393 (5270)	9393 (5270)	9021 (5270)	4706	2406	1899	958	481
03B	8	1552	388	n/a	n/a	9393 (5270)	9393 (5270)	9393 (5270)	4811	3798	1915	963
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR122E Radial magnetic ring max speed 194 poles with protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	1589248	397312	282	141	35	18	9	5	4	2	1
12B	4096	794624	198656	564	282	70	35	18	9	7	4	2
11B	2048	397312	99328	1128	564	141	70	37	19	15	7	4
2D0 (001)	2000	388000	97000	1155	576	144	72	38	19	15	8	4
1D6	1600	310400	77600	1442	722	180	90	47	24	19	10	5
10B	1024	198656	49664	2254	1128	282	141	74	38	30	15	8
1D0 (002)	1000	194000	48500	2308	1155	289	144	75	38	30	15	8
D80	800	155200	38800	2887	1442	361	180	94	48	38	19	10
09B	512	99328	24832	4511	2254	564	282	147	75	59	30	15
D50	500	97000	24250	4619	2308	576	289	151	77	61	31	15
D40 (005)	400	77600	19400	5772 (5270)	2887	722	361	188	96	76	38	19
D32	320	62080	15520	7217 (5270)	3607	903	450	235	120	95	48	24
08B	256	49664	12416	9021 (5270)	4511	1128	564	294	150	119	60	30
D20 (010)	200	38800	9700	11547 (5270)	5772 (5270)	1442	722	376	192	152	77	38
D16	160	31040	7760	7217 (5270)	3607	903	450	235	120	95	48	24
07B	128	24832	6208	18042 (5270)	9021 (5270)	2254	1128	589	301	237	120	60
D10 (020)	100	19400	4850	11547 (5270)	5772 (5270)	1442	722	376	192	152	77	38
D08	80	15520	3880	7217 (5270)	3607	903	450	235	120	95	48	24
06B	64	12416	3104	19678 (5270)	18042 (5270)	4511	2254	1178	601	475	239	120
D04 (050)	40	7760	1940	7217 (5270)	3607	903	450	235	120	95	48	24
05B	32	6208	1552	19678 (5270)	19678 (5270)	9021 (5270)	4511	2353	1203	949	479	241
04B	16	3104	776	n/a	19678 (5270)	18042 (5270)	9021 (5270)	4706	2406	1899	958	481
03B	8	1552	388	n/a	n/a	19678 (5270)	18042 (5270)	9412 (5270)	4811	3798	1915	963
Minimum edge separation (μs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR162Q Radial magnetic ring max speed 256 poles without protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	2097152	524288	214	107	27	13	7	4	3	1	1
12B	4096	1048576	262144	428	214	53	27	14	7	6	3	1
11B	2048	524288	131072	855	428	107	53	28	14	11	6	3
2D0 (001)	2000	512000	128000	876	437	109	55	29	15	12	6	3
1D6	1600	409600	102400	1093	548	137	68	36	18	14	7	4
10B	1024	262144	65536	1708	855	214	107	56	28	22	11	6
1D0 (002)	1000	256000	64000	1749	876	219	109	57	29	23	12	6
D80	800	204800	51200	2188	1093	274	137	71	36	29	15	7
09B	512	131072	32768	3418	1708	428	214	111	57	45	23	11
D50	500	128000	32000	3501	1749	437	219	114	58	46	23	12
D40 (005)	400	102400	25600	4374 (3994)	2188	548	274	143	73	58	29	15
D32	320	81920	20480	5469 (3994)	2734	684	341	178	91	72	36	18
08B	256	65536	16384	6836 (3994)	3418	855	428	223	114	90	45	23
D20 (010)	200	51200	12800	7087 (3994)	4374 (3994)	1093	548	285	146	115	58	29
D16	160	40960	10240	5469 (3994)	2734	684	341	178	91	72	36	18
07B	128	32768	8192	7087 (3994)	6836 (3994)	1708	855	446	228	180	91	46
D10 (020)	100	25600	6400	7087 (3994)	4374 (3994)	1093	548	285	146	115	58	29
D08	80	20480	5120	5469 (3994)	2734	684	341	178	91	72	36	18
06B	64	16384	4096	7087 (3994)	7087 (3994)	3418	1708	893	456	360	181	91
D04 (050)	40	10240	2560	5469 (3994)	2734	684	341	178	91	72	36	18
05B	32	8192	2048	7087 (3994)	7087 (3994)	6836 (3994)	3418	1783	912	720	363	182
04B	16	4096	1024	n/a	7087 (3994)	7087 (3994)	6836 (3994)	3566	1823	1439	726	365
03B	8	2048	512	n/a	n/a	7087 (3994)	7087 (3994)	7087 (3994)	3646	2878	1452	730
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR162Q Radial magnetic ring max speed 256 poles with protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	2097152	524288	214	107	27	13	7	4	3	1	1
12B	4096	1048576	262144	428	214	53	27	14	7	6	3	1
11B	2048	524288	131072	855	428	107	53	28	14	11	6	3
2D0 (001)	2000	512000	128000	876	437	109	55	29	15	12	6	3
1D6	1600	409600	102400	1093	548	137	68	36	18	14	7	4
10B	1024	262144	65536	1708	855	214	107	56	28	22	11	6
1D0 (002)	1000	256000	64000	1749	876	219	109	57	29	23	12	6
D80	800	204800	51200	2188	1093	274	137	71	36	29	15	7
09B	512	131072	32768	3418	1708	428	214	111	57	45	23	11
D50	500	128000	32000	3501	1749	437	219	114	58	46	23	12
D40 (005)	400	102400	25600	4374 (3994)	2188	548	274	143	73	58	29	15
D32	320	81920	20480	5469 (3994)	2734	684	341	178	91	72	36	18
08B	256	65536	16384	6836 (3994)	3418	855	428	223	114	90	45	23
D20 (010)	200	51200	12800	8751 (3994)	4374 (3994)	1093	548	285	146	115	58	29
D16	160	40960	10240	5469 (3994)	2734	684	341	178	91	72	36	18
07B	128	32768	8192	13673 (3994)	6836 (3994)	1708	855	446	228	180	91	46
D10 (020)	100	25600	6400	8751 (3994)	4374 (3994)	1093	548	285	146	115	58	29
D08	80	20480	5120	5469 (3994)	2734	684	341	178	91	72	36	18
06B	64	16384	4096	14847 (3994)	13673 (3994)	3418	1708	893	456	360	181	91
D04 (050)	40	10240	2560	5469 (3994)	2734	684	341	178	91	72	36	18
05B	32	8192	2048	14847 (3994)	14847 (3994)	6836 (3994)	3418	1783	912	720	363	182
04B	16	4096	1024	n/a	14847 (3994)	13673 (3994)	6836 (3994)	3566	1823	1439	726	365
03B	8	2048	512	n/a	n/a	14847 (3994)	13673 (3994)	7133 (3994)	3646	2878	1452	730
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR324E Radial magnetic ring max speed 512 poles without protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	4194304	1048576	107	53	13	7	3	2	1	1	0
12B	4096	2097152	524288	214	107	27	13	7	4	3	1	1
11B	2048	1048576	262144	428	214	53	27	14	7	6	3	1
2D0 (001)	2000	1024000	256000	438	218	55	27	14	7	6	3	1
1D6	1600	819200	204800	547	274	68	34	18	9	7	4	2
10B	1024	524288	131072	854	428	107	53	28	14	11	6	3
1D0 (002)	1000	512000	128000	875	438	110	55	29	15	12	6	3
D80	800	409600	102400	1094	547	137	68	36	18	14	7	4
09B	512	262144	65536	1709	854	214	107	56	28	22	11	6
D50	500	256000	64000	1750	875	218	110	57	29	23	12	6
D40 (005)	400	204800	51200	2187 (1997)	1094	274	137	71	36	29	15	7
D32	320	163840	40960	2735 (1997)	1367	342	171	89	46	36	18	9
08B	256	131072	32768	3418 (1997)	1709	428	214	112	57	45	23	11
D20 (010)	200	102400	25600	3525 (1997)	2187 (1997)	547	274	143	73	58	29	15
D16	160	81920	20480	2735 (1997)	1367	342	171	89	46	36	18	9
07B	128	65536	16384	3525 (1997)	3418 (1997)	854	428	223	114	90	45	23
D10 (020)	100	51200	12800	3525 (1997)	2187 (1997)	547	274	143	73	58	29	15
D08	80	40960	10240	2735 (1997)	1367	342	171	89	46	36	18	9
06B	64	32768	8192	3525 (1997)	3525 (1997)	1709	854	446	228	180	91	46
D04 (050)	40	20480	5120	2735 (1997)	1367	342	171	89	46	36	18	9
05B	32	16384	4096	3525 (1997)	3525 (1997)	3418 (1997)	1709	892	456	360	181	91
04B	16	8192	2048	n/a	3525 (1997)	3525 (1997)	3418 (1997)	1783	912	720	363	182
03B	8	4096	1024	n/a	n/a	3525 (1997)	3525 (1997)	3525 (1997)	1823	1439	726	365
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR324E Radial magnetic ring max speed 512 poles with protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	4194304	1048576	107	53	13	7	3	2	1	1	0
12B	4096	2097152	524288	214	107	27	13	7	4	3	1	1
11B	2048	1048576	262144	428	214	53	27	14	7	6	3	1
2D0 (001)	2000	1024000	256000	438	218	55	27	14	7	6	3	1
1D6	1600	819200	204800	547	274	68	34	18	9	7	4	2
10B	1024	524288	131072	854	428	107	53	28	14	11	6	3
1D0 (002)	1000	512000	128000	875	438	110	55	29	15	12	6	3
D80	800	409600	102400	1094	547	137	68	36	18	14	7	4
09B	512	262144	65536	1709	854	214	107	56	28	22	11	6
D50	500	256000	64000	1750	875	218	110	57	29	23	12	6
D40 (005)	400	204800	51200	2187 (1997)	1094	274	137	71	36	29	15	7
D32	320	163840	40960	2735 (1997)	1367	342	171	89	46	36	18	9
08B	256	131072	32768	3418 (1997)	1709	428	214	112	57	45	23	11
D20 (010)	200	102400	25600	4375 (1997)	2187 (1997)	547	274	143	73	58	29	15
D16	160	81920	20480	2735 (1997)	1367	342	171	89	46	36	18	9
07B	128	65536	16384	6836 (1997)	3418 (1997)	854	428	223	114	90	45	23
D10 (020)	100	51200	12800	4375 (1997)	2187 (1997)	547	274	143	73	58	29	15
D08	80	40960	10240	2735 (1997)	1367	342	171	89	46	36	18	9
06B	64	32768	8192	7384 (1997)	6836 (1997)	1709	854	446	228	180	91	46
D04 (050)	40	20480	5120	2735 (1997)	1367	342	171	89	46	36	18	9
05B	32	16384	4096	7384 (1997)	7384 (1997)	3418 (1997)	1709	892	456	360	181	91
04B	16	8192	2048	n/a	7384 (1997)	6836 (1997)	3418 (1997)	1783	912	720	363	182
03B	8	4096	1024	n/a	n/a	7384 (1997)	6836 (1997)	3566 (1997)	1823	1439	726	365
Minimum edge separation (μs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR406E Radial magnetic ring max speed 640 poles without protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	5242880	1310720	86	43	11	5	3	1	1	1	0
12B	4096	2621440	655360	171	86	21	11	6	3	2	1	1
11B	2048	1310720	327680	342	171	43	21	11	6	4	2	1
2D0 (001)	2000	1280000	320000	350	175	44	22	11	6	5	2	1
1D6	1600	1024000	256000	437	219	55	27	14	7	6	3	1
10B	1024	655360	163840	683	342	86	43	22	11	9	5	2
1D0 (002)	1000	640000	160000	700	350	88	44	23	12	9	5	2
D80	800	512000	128000	875	437	110	55	29	15	12	6	3
09B	512	327680	81920	1367	683	171	86	45	23	18	9	5
D50	500	320000	80000	1400	700	175	88	46	23	18	9	5
D40 (005)	400	256000	64000	1750 (1598)	875	219	110	57	29	23	12	6
D32	320	204800	51200	2188 (1598)	1094	274	137	71	36	29	15	7
08B	256	163840	40960	2735 (1598)	1367	342	171	89	46	36	18	9
D20 (010)	200	128000	32000	2818 (1598)	1750 (1598)	437	219	114	58	46	23	12
D16	160	102400	25600	2188 (1598)	1094	274	137	71	36	29	15	7
07B	128	81920	20480	2818 (1598)	2735 (1598)	683	342	179	91	72	36	18
D10 (020)	100	64000	16000	2818 (1598)	1750 (1598)	437	219	114	58	46	23	12
D08	80	51200	12800	2188 (1598)	1094	274	137	71	36	29	15	7
06B	64	40960	10240	2818 (1598)	2818 (1598)	1367	683	357	182	144	73	36
D04 (050)	40	25600	6400	2188 (1598)	1094	274	137	71	36	29	15	7
05B	32	20480	5120	2818 (1598)	2818 (1598)	2735 (1598)	1367	713	365	288	145	73
04B	16	10240	2560	n/a	2818 (1598)	2818 (1598)	2735 (1598)	1427	729	576	290	146
03B	8	5120	1280	n/a	n/a	2818 (1598)	2818 (1598)	2818 (1598)	1458	1151	581	292
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

MR406E Radial magnetic ring max speed 640 poles with protection cover

Valid for:

LM10	LM13	LM13_20 High speed	LM15	RLB	RLM	RLC
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Ordering code	Interpolation	Resolution		Maximum rpm								
		cpr	ppr	NOTE: Values in brackets are valid for LM13 standard version only.								
13B	8192	5242880	1310720	86	43	11	5	3	1	1	1	0
12B	4096	2621440	655360	171	86	21	11	6	3	2	1	1
11B	2048	1310720	327680	342	171	43	21	11	6	4	2	1
2D0 (001)	2000	1280000	320000	350	175	44	22	11	6	5	2	1
1D6	1600	1024000	256000	437	219	55	27	14	7	6	3	1
10B	1024	655360	163840	683	342	86	43	22	11	9	5	2
1D0 (002)	1000	640000	160000	700	350	88	44	23	12	9	5	2
D80	800	512000	128000	875	437	110	55	29	15	12	6	3
09B	512	327680	81920	1367	683	171	86	45	23	18	9	5
D50	500	320000	80000	1400	700	175	88	46	23	18	9	5
D40 (005)	400	256000	64000	1750 (1598)	875	219	110	57	29	23	12	6
D32	320	204800	51200	2188 (1598)	1094	274	137	71	36	29	15	7
08B	256	163840	40960	2735 (1598)	1367	342	171	89	46	36	18	9
D20 (010)	200	128000	32000	3500 (1598)	1750 (1598)	437	219	114	58	46	23	12
D16	160	102400	25600	2188 (1598)	1094	274	137	71	36	29	15	7
07B	128	81920	20480	5469 (1598)	2735 (1598)	683	342	179	91	72	36	18
D10 (020)	100	64000	16000	3500 (1598)	1750 (1598)	437	219	114	58	46	23	12
D08	80	51200	12800	2188 (1598)	1094	274	137	71	36	29	15	7
06B	64	40960	10240	5903 (1598)	5469 (1598)	1367	683	357	182	144	73	36
D04 (050)	40	25600	6400	2188 (1598)	1094	274	137	71	36	29	15	7
05B	32	20480	5120	5903 (1598)	5903 (1598)	2735 (1598)	1367	713	365	288	145	73
04B	16	10240	2560	n/a	5903 (1598)	5469 (1598)	2735 (1598)	1427	729	576	290	146
03B	8	5120	1280	n/a	n/a	5903 (1598)	5469 (1598)	2853 (1598)	1458	1151	581	292
Minimum edge separation (µs)				0.07	0.13	0.50	1	2	4	5	10	20
Maximum count frequency (MHz)				15	8	2	1	0.5	0.25	0.2	0.1	0.05
Part numbering				K	A	B	C	D	E	F	G	H

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Document issues

Issue	Date	Page	Corrections made
1	18. 9. 2019	General	New document

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