

CAPACITOR



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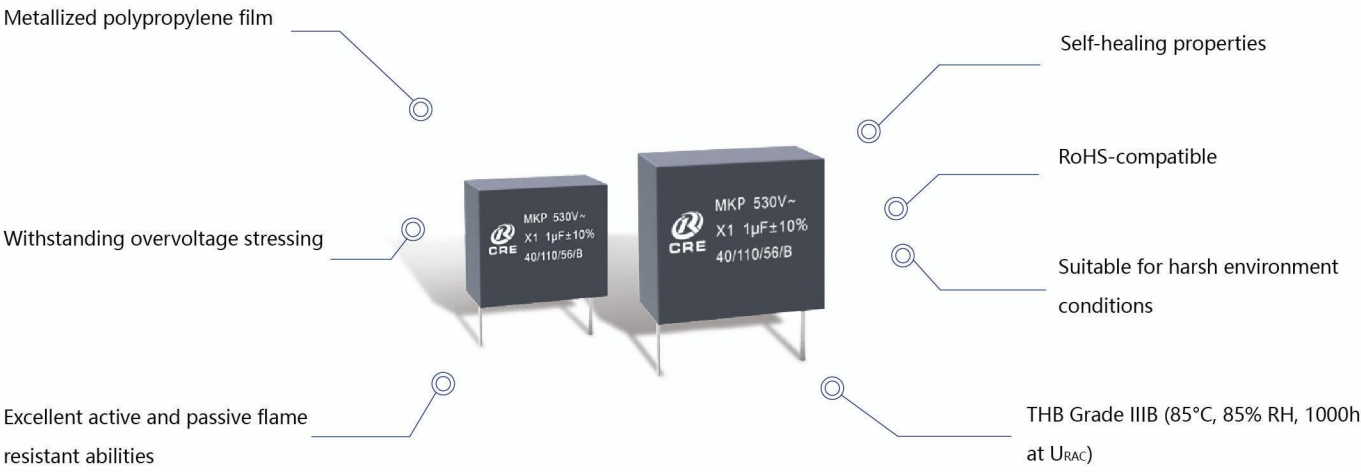
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MKP-X1
EMC-filter

POWER LINKS SUCCESS

EMI Suppression Capacitors X1 series



APPLICATIONS

- X1 class for interference suppression
- Widely used in across-the- line, EMI suppression
- Widely used in Clamping,AC and Harmonic Filtering,UPS Systems, Solar Inverter with LCL Filter and Motor Drive

Technical data

Climatic Category / Passive Flammability Category	40/110/56/B		
Operating temperature range	-40°C~ +110°C		
Capacitance range	0.001~10μF		
Rated voltage	AC 440V/480V/530V,50~60Hz		
Maximum continuous DC voltage	DC 1000V		
Cap.tol	±5% (J) ; ±10% (K) ; ±20% (M)		
Dissipation factor	$C_N \leq 0.47\mu F$	$0.47\mu F < C_N \leq 1.0\mu F$	$C_N > 1.0\mu F$
	$\leq 1 \times 10^{-3}$ (1kHz,20°C)	$\leq 2 \times 10^{-3}$ (1kHz,20°C)	$\leq 3 \times 10^{-3}$ (1kHz,20°C)
insulation resistance	V test(VDC) 1min	$C_N \leq 0.33\mu F$	$C_N > 0.33\mu F$
	100±15	$\geq 30,000M\Omega$	$\geq 10000s$
DC test voltage	4.3U _R (DC), 2s		

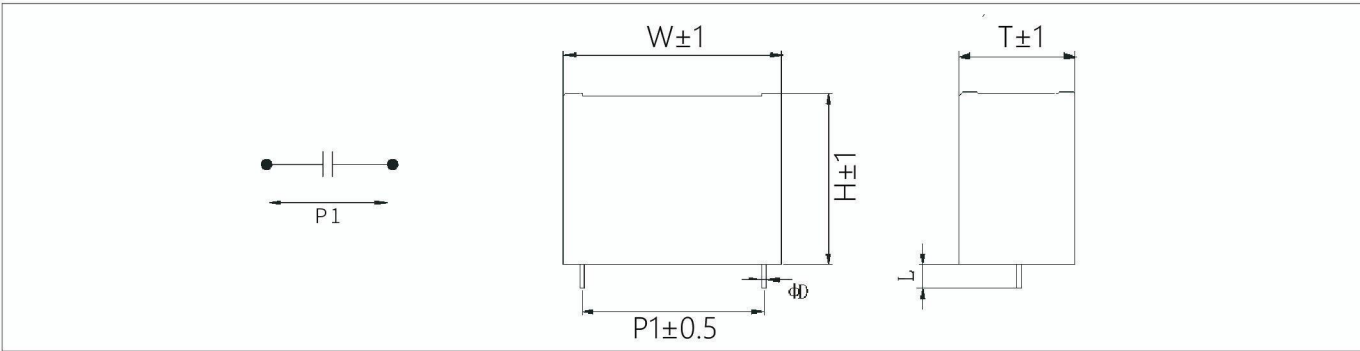


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THE DV/DT TABLE

Dv/dt (V/μs)					
P=10mm	P=15mm	P=22.5mm	P=27.5mm	P=37.5mm	P=52.5mm
475	400	200	150	100	75

THE CONTOUR MAP



PART NUMBER SYSTEM

Type code	Capacitance	Rated Voltage(AC)	Tolerance	Pin	Lead Pitch P1 (mm)	Lead Pitch P2 (mm)	Lead Pitch P2 (mm)	Internal code
1~3	4~6	7~10	11	12	13	14	15	16~17
MKP	105= 10×10^{-5} pF =1μF	0530=530VAC	J=±5% K=±10% M=±20%	2 : 2Pin	2 : P1=10 3 : P1=15 4 : P1=22.5 5 : P1=27.5 6 : P1=37.5 7 : P1=52.5	0 : 无	1 : L=4 2 : L=15	01

Specification table

C _N (μF)	W(mm)	T(mm)	H(mm)	φD(mm)	P1(mm)	Part number	C _N (μF)	W(mm)	T(mm)	H(mm)	φD(mm)	P1(mm)	Part number
0.0010	13.0	4.0	9.0	0.6	10.0	MKP1020530*220***	0.0082	13.0	4.0	9.0	0.6	10.0	MKP8220530*220***
0.0012	13.0	4.0	9.0	0.6	10.0	MKP1220530*220***	0.010	13.0	4.0	9.0	0.6	10.0	MKP1030530*220***
0.0015	13.0	4.0	9.0	0.6	10.0	MKP1520530*220***	0.012	13.0	5.0	11.0	0.6	10.0	MKP1230530*220***
0.0018	13.0	4.0	9.0	0.6	10.0	MKP1820530*220***	0.015	13.0	5.0	11.0	0.6	10.0	MKP1330530*220***
0.0022	13.0	4.0	9.0	0.6	10.0	MKP2220530*220***	0.018	13.0	5.0	11.0	0.6	10.0	MKP1830530*220***
0.0027	13.0	4.0	9.0	0.6	10.0	MKP2720530*220***	0.022	13.0	5.0	11.0	0.6	10.0	MKP2230530*220***
0.0033	13.0	4.0	9.0	0.6	10.0	MKP3320530*220***	0.027	13.0	6.0	12.0	0.6	10.0	MKP2730530*220***
0.0039	13.0	4.0	9.0	0.6	10.0	MKP3920530*220***	0.033	13.0	6.0	12.0	0.6	10.0	MKP3330530*220***
0.0047	13.0	4.0	9.0	0.6	10.0	MKP4720530*220***	0.039	13.0	7.0	13.0	0.6	10.0	MKP3930530*220***
0.0056	13.0	4.0	9.0	0.6	10.0	MKP5620530*220***	0.047	13.0	7.0	13.0	0.6	10.0	MKP4730530*220***
0.0068	13.0	4.0	9.0	0.6	10.0	MKP6820530*220***	0.047	13.0	8.0	14.0	0.6	10.0	MKP4730530*220***

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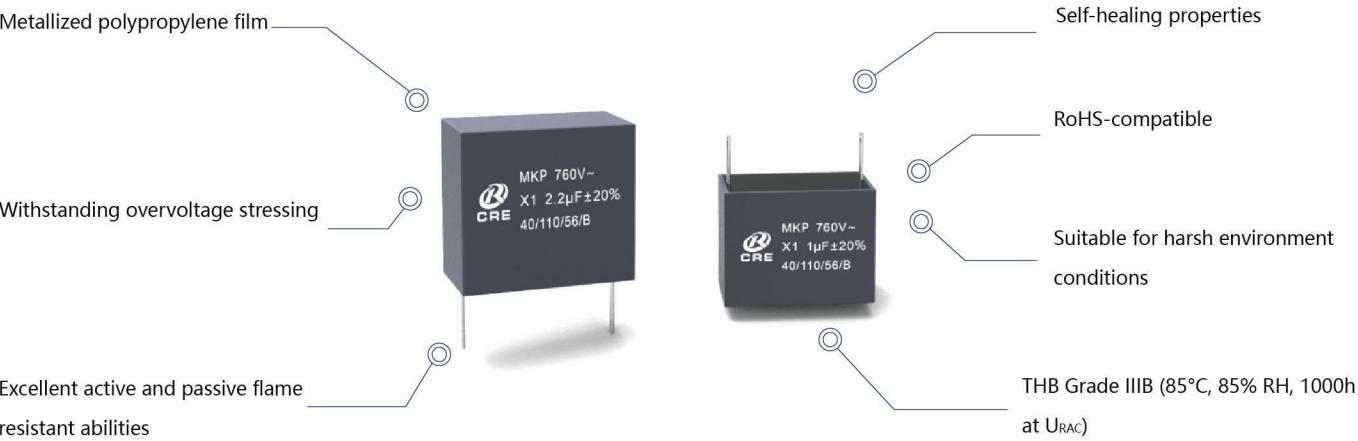
EMI Suppression Capacitors X1 series

Specification table

C _N (μF)	W(mm)	T(mm)	H(mm)	φD(mm)	P1(mm)	Part number	C _N (μF)	W(mm)	T(mm)	H(mm)	φD(mm)	P1(mm)	Part number
0.056	13.0	8.0	14.0	0.6	10.0	MKP5630530*220***	0.47	32.0	11.0	20.0	0.8	27.5	MKP4740530*250***
0.010	17.5	5.0	9.5	0.6	15.0	MKP1030530*230***	0.47	32.0	22.0	12.0	0.8	27.5	MKP4740530*250***
0.012	17.5	5.0	9.5	0.6	15.0	MKP1230530*230***	0.56	32.0	13.0	22.0	0.8	27.5	MKP5640530*250***
0.015	17.5	5.0	9.5	0.6	15.0	MKP1530530*230***	0.68	32.0	13.0	22.0	0.8	27.5	MKP6840530*250***
0.018	17.5	5.0	9.5	0.6	15.0	MKP1830530*230***	0.68	32.0	13.0	25.0	0.8	27.5	MKP6840530*250***
0.022	17.5	5.0	9.5	0.6	15.0	MKP2230530*230***	0.68	32.0	15.0	24.5	0.8	27.5	MKP6840530*250***
0.027	17.5	5.0	11.0	0.6	15.0	MKP2730530*230***	0.68	32.0	22.0	16.0	0.8	27.5	MKP6840530*250***
0.033	17.5	5.0	11.0	0.6	15.0	MKP3330530*230***	0.82	32.0	13.0	25.0	0.8	27.5	MKP8240530*250***
0.039	17.5	6.0	12.0	0.6	15.0	MKP3930530*230***	0.82	32.0	15.0	24.5	0.8	27.5	MKP8240530*250***
0.047	17.5	6.0	12.0	0.6	15.0	MKP4730530*230***	0.82	32.0	14.0	28.0	0.8	27.5	MKP8240530*250***
0.056	17.5	6.0	12.0	0.6	15.0	MKP5630530*230***	1.0	32.0	27.5	16.0	0.8	27.5	MKP1050530*250***
0.056	17.5	7.0	12.0	0.6	15.0	MKP5630530*230***	1.0	32.0	31.0	18.5	0.8	27.5	MKP1050530*250***
0.068	17.5	7.5	13.5	0.6	15.0	MKP6830530*230***	1.0	32.0	17.0	18.0	0.8	27.5	MKP1050530*250***
0.068	17.5	13.0	12.0	0.6	15.0	MKP6830530*230***	1.0	32.0	16.0	30.0	0.8	27.5	MKP1050530*250***
0.082	17.5	8.0	14.0	0.6	15.0	MKP8230530*230***	1.2	32.0	16.0	30.0	0.8	27.5	MKP1250530*250***
0.10	17.5	8.0	14.0	0.6	15.0	MKP1040530*230***	1.2	32.0	17.0	28.0	0.8	27.5	MKP1250530*250***
0.10	17.5	8.5	14.0	0.6	15.0	MKP1040530*230***	1.2	32.0	19.0	29.0	0.8	27.5	MKP1250530*250***
0.12	17.5	10.0	16.0	0.8	15.0	MKP1240530*230***	1.2	32.0	18.0	33.0	0.8	27.5	MKP1250530*250***
0.15	17.5	10.0	16.0	0.8	15.0	MKP1540530*230***	1.5	32.0	19.0	29.0	0.8	27.5	MKP1550530*250***
0.15	17.5	11.0	19.0	0.8	15.0	MKP1540530*230***	1.	32.0	31.0	18.5	0.8	27.5	MKP1550530*250***
0.18	17.5	11.0	19.0	0.8	15.0	MKP1840530*230***	1.5	32.0	18.0	33.0	0.8	27.5	MKP1550530*250***
0.039	26.5	6.0	15.0	0.8	22.5	MKP3930530*240***	1.8	32.0	22.0	37.0	0.8	27.5	MKP1850530*250***
0.047	26.5	6.0	15.0	0.8	22.5	MKP4730530*240***	2.2	32.0	22.0	37.0	0.8	27.5	MKP2250530*250***
0.056	26.5	6.0	15.0	0.8	22.5	MKP5630530*240***	0.33	41.0	11.0	22.0	1.0	37.5	MKP3340530*260***
0.068	26.5	6.0	15.0	0.8	22.5	MKP6830530*240***	0.39	41.0	11.0	22.0	1.0	37.5	MKP3940530*260***
0.082	26.5	6.0	15.0	0.8	22.5	MKP8230530*240***	0.47	41.0	11.0	22.0	1.0	37.5	MKP4740530*260***
0.10	26.5	6.0	15.0	0.8	22.5	MKP1040530*240***	0.56	41.0	11.0	22.0	1.0	37.5	MKP5640530*260***
0.12	26.5	6.0	15.0	0.8	22.5	MKP1240530*240***	0.68	41.0	11.0	22.0	1.0	37.5	MKP6840530*260***
0.15	26.5	7.0	16.0	0.8	22.5	MKP1540530*240***	0.82	41.0	11.0	22.0	1.0	37.5	MKP8240530*260***
0.18	26.5	8.5	17.0	0.8	22.5	MKP1840530*240***	0.82	41.0	113.0	24.0	1.0	37.5	MKP8240530*260***
0.22	26.5	8.5	17.0	0.8	22.5	MKP2240530*240***	1.0	41.0	13.0	24.0	1.0	37.5	MKP1050530*260***
0.27	26.5	10.0	18.5	0.8	22.5	MKP2740530*240***	1.0	42.0	24.0	15.0	1.0	37.5	MKP1050530*260***
0.33	26.5	11.0	20.0	0.8	22.5	MKP3340530*240***	1.2	41.0	15.0	26.0	1.0	37.5	MKP1250530*260***
0.39	26.5	11.0	20.0	0.8	22.5	MKP3940530*240***	1.2	42.0	14.0	28.0	1.0	37.5	MKP1050530*260***
0.47	26.5	12.0	22.0	0.8	22.5	MKP4740530*240***	1.5	41.0	15.0	26.0	1.0	37.5	MKP1550530*260***
0.47	26.5	13.5	23.0	0.8	22.5	MKP4740530*240***	1.5	42.0	14.0	28.0	1.0	37.5	MKP1550530*260***
0.56	26.5	13.5	23.0	0.8	22.5	MKP5640530*240***	1.5	41.0	16.0	30.0	1.0	37.5	MKP1550530*260***
0.56	26.5	15.5	24.5	0.8	22.5	MKP5640530*240***	1.5	42.0	24.0	19.0	1.0	37.5	MKP1550530*260***
0.68	26.5	15.5	24.5	0.8	22.5	MKP6840530*240***	1.8	41.0	16.0	30.0	1.0	37.5	MKP1850530*260***
0.15	32.0	9.0	18.0	0.8	27.5	MKP1540530*250***	1.8	41.0	17.0	32.0	1.0	37.5	MKP1850530*260***
0.18	32.0	9.0	18.0	0.8	27.5	MKP1840530*250***	2.2	41.0	17.0	32.0	1.0	37.5	MKP2250530*260***
0.22	32.0	9.0	18.0	0.8	27.5	MKP2240530*250***	2.2	41.0	18.5	33.5	1.0	37.5	MKP2250530*260***
0.27	32.0	9.0	18.0	0.8	27.5	MKP2740530*250***	2.7	41.0	22.0	37.0	1.0	37.5	MKP2750530*260***
0.33	32.0	9.0	18.0	0.8	27.5	MKP3340530*250***	3.3	41.0	22.0	37.0	1.0	37.5	MKP3350530*260***
0.33	32.0	18.0	12.0	0.8	27.5	MKP3340530*250***	3.3	41.0	26.0	41.0	1.0	37.5	MKP3350530*260***
0.39	32.0	11.0	20.0	0.8	27.5	MKP3940530*250***	3.3	41.5	27.5	37.5	1.0	37.5	MKP3350530*260***

Specification table

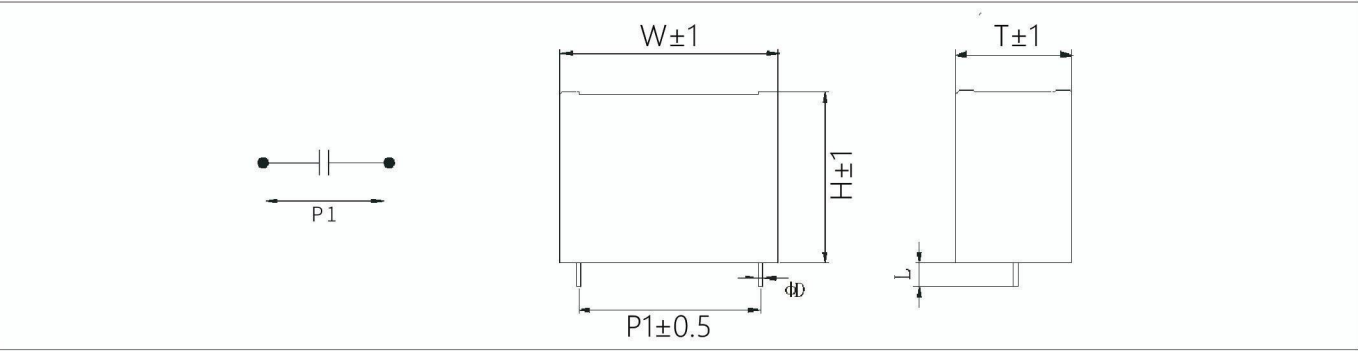
C _N (μF)	W(mm)	T(mm)	H(mm)	φD(mm)	P1(mm)	Part number	C _N (μF)	W(mm)	T(mm)	H(mm)	φD(mm)	P1(mm)	Part number
3.9	41.0	26.0	41.0	1.0	37.5	MKP3950530*260***	5.6	57.0	30.0	45.0	1.2	52.5	MKP5650530*270***
3.9	41.5	27.5	37.5	1.0	37.5	MKP3950530*260***	6.8	57.0	30.0	45.0	1.2	52.5	MKP6850530*270***
4.7	41.0	28.0	43.0	1.0	37.5	MKP4750530*260***	6.8	57.0	44.0	30.0	1.2	52.5	MKP6850530*270***
4.7	42.0	30.0	45.0	1.0	37.5	MKP4750530*260***	8.2	57.0	35.0	50.0	1.2	52.5	MKP8250530*270***
4.7	57.0	24.0	38.0	1.2	52.5	MKP4750530*270***	10.0	57.0	35.0	50.0	1.2	52.5	MKP1060530*270***



APPLICATIONS

- X1 class for interference suppression
- Widely used in across-the- line, EMI suppression
- Widely used in Clamping,AC and Harmonic Filtering,UPS Systems, Solar Inverter with LCL Filter and Motor Drive

THE CONTOUR MAP



EMI Suppression Capacitors X1 series

Technical data

Climatic Category / Passive Flammability Category	40/110/56/B		
Operating temperature range	-40°C~ +110°C		
Capacitance range	0.001~2.2μF		
Rated voltage	AC 760V,50~60Hz		
Maximum continuous DC voltage	DC 1500V		
Cap.tol	±5% (J) ; ±10% (K) ; ±20% (M)		
Dissipation factor	C _N ≤0.47μF	0.47μF < C _N ≤1.0μF	C _N > 1.0μF
	≤1×10 ⁻³ (1kHz,20°C)	≤2×10 ⁻³ (1kHz,20°C)	≤3×10 ⁻³ (1kHz,20°C)
insulation resistance	V test(VDC) 1min	C _N ≤0.33μF	C _N > 0.33μF
	100±15	≥30,000MΩ	≥10000s
DC test voltage	4.3U _R (DC), 2s		

THE DV/DT TABLE

Dv/dt (V/μs)					
P=10mm	P=15mm	P=22.5mm	P=27.5mm	P=37.5mm	P=52.5mm
475	400	200	150	150	75

PART NUMBER SYSTEM

Type code	Capacitance	Rated Voltage(AC)	Tolerance	Pin	Lead Pitch P1 (mm)	Lead Pitch P2 (mm)	Lead Pitch P2 (mm)	Internal code
1~3	4~6	7~10	11	12	13	14	15	16~17
MKP	105= 10×10 ⁵ pF =1μF	0760=760VAC	J=±5% K=±10% M=±20%	2 : 2Pin	2 : P1=10 3 : P1=15 4 : P1=22.5 5 : P1=27.5 6 : P1=37.5 7 : P1=52.5	0 : 无	1 : L=4 2 : L=15	01

Specification table

C _N (μF)	W(mm)	T(mm)	H(mm)	φD(mm)	P1(mm)	Part number	C _N (μF)	W(mm)	T(mm)	H(mm)	φD(mm)	P1(mm)	Part number
0.0010	17.5	5.0	9.5	0.6	15	MKP1020760*230***	0.0027	17.5	5.0	9.5	0.6	15	MKP2720760*230***
0.0012	17.5	5.0	9.5	0.6	15	MKP1220760*230***	0.0033	17.5	5.0	11.0	0.6	15	MKP3320760*230***
0.0015	17.5	5.0	9.5	0.6	15	MKP1520760*230***	0.0047	17.5	5.0	11.0	0.6	15	MKP4720760*230***
0.0018	17.5	5.0	9.5	0.6	15	MKP1820760*230***	0.0056	17.5	5.0	11.0	0.6	15	MKP5620760*230***
0.0022	17.5	5.0	9.5	0.6	15	MKP2220760*230***	0.0068	17.5	5.0	11.0	0.6	15	MKP6820760*230***

续上表

Specification table

C _N (μF)	W(mm)	T(mm)	H(mm)	φD(mm)	P1(mm)	Part number	C _N (μF)	W(mm)	T(mm)	H(mm)	φD(mm)	P1(mm)	Part number
0.0082	17.5	5.0	11.0	0.6	15	MKP8220760*230***	0.27	32.0	13.0	22.0	0.8	27.5	MKP2740760*250***
0.010	17.5	5.0	11.0	0.6	15	MKP1030760*230***	0.33	32.0	15.0	24.5	0.8	27.5	MKP3340760*250***
0.012	17.5	6.0	12.0	0.6	15	MKP1230760*230***	0.33	32.0	14.0	28.0	0.8	27.5	MKP3340760*250***
0.015	17.5	6.0	12.0	0.6	15	MKP1530760*230***	0.33	32.0	27.5	16.0	0.8	27.5	MKP3340760*250***
0.018	17.5	7.0	12.0	0.6	15	MKP1830760*230***	0.39	32.0	17.0	28.0	0.8	27.5	MKP3940760*250***
0.022	17.5	7.5	13.5	0.6	15	MKP2230760*230***	0.39	32.0	16.0	30.0	0.8	27.5	MKP3940760*250***
0.027	17.5	8.0	14.0	0.6	15	MKP2730760*230***	0.47	32.0	17.0	28.0	0.8	27.5	MKP4740760*250***
0.033	17.5	8.5	14.5	0.6	15	MKP3330760*230***	0.47	32.0	19.0	29.0	0.8	27.5	MKP4740760*250***
0.039	17.5	10.0	16.0	0.8	15	MKP3930760*230***	0.47	32.0	16.0	30.0	0.8	27.5	MKP4740760*250***
0.047	17.5	10.0	16.0	0.8	15	MKP4730760*230***	0.47	32.0	31.0	18.5	0.8	27.5	MKP4740760*250***
0.047	17.5	11.0	19.0	0.8	15	MKP4730760*230***	0.56	32.0	18.0	33.0	0.8	27.5	MKP5640760*250***
0.056	17.5	11.0	19.0	0.8	15	MKP5630760*230***	0.68	32.0	22.0	37.0	0.8	27.5	MKP6840760*250***
0.068	17.5	11.0	19.0	0.8	15	MKP6830760*230***	0.33	41.0	12.0	26.0	1.0	37.5	MKP3340760*260***
0.010	26.5	6.0	15.0	0.8	22.5	MKP1030760*240***	0.33	41.0	13.0	24.0	1.0	37.5	MKP3340760*260***
0.012	26.5	6.0	15.0	0.8	22.5	MKP1230760*240***	0.33	42.0	24.0	15.0	1.0	37.5	MKP3340760*260***
0.015	26.5	6.0	15.0	0.8	22.5	MKP1530760*240***	0.39	41.0	12.0	26.0	1.0	37.5	MKP3940760*260***
0.018	26.5	6.0	15.0	0.8	22.5	MKP1830760*240***	0.39	41.0	13.0	24.0	1.0	37.5	MKP3940760*260***
0.022	26.5	6.0	15.0	0.8	22.5	MKP2230760*240***	0.47	42.0	24.0	15.0	1.0	37.5	MKP4740760*260***
0.027	26.5	6.0	15.0	0.8	22.5	MKP2730760*240***	0.47	41.0	15.0	26.0	1.0	37.5	MKP4740760*260***
0.033	26.5	6.0	15.0	0.8	22.5	MKP3330760*240***	0.47	42.0	14.0	28.0	1.0	37.5	MKP4740760*260***
0.039	26.5	6.0	15.0	0.8	22.5	MKP3930760*240***	0.56	41.0	16.0	30.0	1.0	37.5	MKP5640760*260***
0.047	26.5	6.0	15.0	0.8	22.5	MKP4730760*240***	0.68	42.0	24.0	19.0	1.0	37.5	MKP6840760*260***
0.056	26.5	7.0	16.0	0.8	22.5	MKP5630760*240***	0.68	41.0	26.0	20.0	1.0	37.5	MKP6840760*260***
0.068	26.5	7.0	16.0	0.8	22.5	MKP6830760*240***	0.68	41.0	16.0	30.0	1.0	37.5	MKP6840760*260***
0.082	26.5	8.5	17.0	0.8	22.5	MKP8230760*240***	0.82	41.0	18.5	33.5	1.0	37.5	MKP8240760*260***
0.10	26.5	8.5	17.0	0.8	22.5	MKP1040760*240***	1.0	41.0	18.5	33.5	1.0	37.5	MKP1050760*260***
0.10	26.5	10.0	18.5	0.8	22.5	MKP1040760*240***	1.0K	41.0	22.0	37.0	1.0	37.5	MKP1050760*260***
0.12	26.5	10.0	18.5	0.8	22.5	MKP1240760*240***	1.0	42.0	32.0	24.0	1.0	37.5	MKP1050760*260***
0.15	26.5	11.0	20.0	0.8	22.5	MKP1540760*240***	1.2	41.0	22.0	37.0	1.0	37.5	MKP1250760*260***
0.18	26.5	12.0	22.0	0.8	22.5	MKP1840760*240***	1.5	41.0	26.0	41.0	1.0	37.5	MKP1550760*260***
0.22	26.5	12.0	22.0	0.8	22.5	MKP2240760*240***	1.5	41.5	27.5	37.5	1.0	37.5	MKP1550760*260***
0.22	26.5	13.5	23.0	0.8	22.5	MKP2240760*240***	1.8	41.0	26.0	41.0	1.0	37.5	MKP1850760*260***
0.27	26.5	15.5	24.5	0.8	22.5	MKP2740760*240***	1.8	41.5	27.5	37.5	1.0	37.5	MKP1850760*260***
0.33	26.5	14.5	29.5	0.8	22.5	MKP3340760*240***	1.8	41.0	28.0	43.0	1.0	37.5	MKP1850760*260***
0.068	32.0	9.0	18.0	0.8	27.5	MKP6830760*250***	2.2	42.0	30.0	45.0	1.0	37.5	MKP2250760*260***
0.082	32.0	9.0	18.0	0.8	27.5	MKP8230760*250***							
0.10	32.0	9.0	18.0	0.8	27.5	MKP1040760*250***							
0.10	32.0	18.0	12.0	0.8	27.5	MKP1040760*250***							
0.12	32.0	9.0	18.0	0.8	27.5	MKP1240760*250***							
0.15	32.0	18.0	12.0	0.8	27.5	MKP1540760*250***							
0.15	32.0	22.0	12.0	0.8	27.5	MKP1540760*250***							
0.15	32.0	11.0	20.0	0.8	27.5	MKP1540760*250***							
0.18	32.0	11.0	20.0	0.8	27.5	MKP1840760*250***							
0.22	32.0	13.0	22.0	0.8	27.5	MKP2240760*250***							
0.22	32.0	22.0	12.0	0.8	27.5	MKP2240760*250***							
0.22	32.0	22.0	16.0	0.8	27.5	MKP2240760*250***							

