

MPL Series



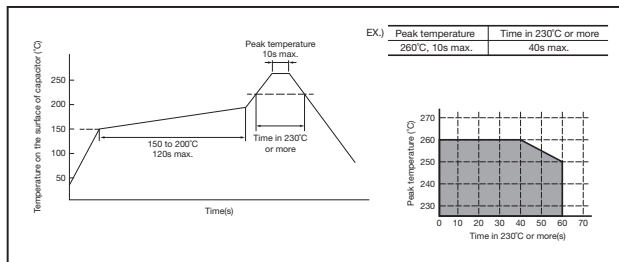
Features

- ▶ Resin molded case structure utilizes multi-layer aluminum foil for anode and solid conductive polymer for cathode
- ▶ Excellent low impedance characteristics for noise suppression and decoupling
- ▶ High capacitance and Low ESR
- ▶ Stable capacitance with applied voltage/temperature/ high frequencies
- ▶ No voltage derating required
- ▶ Polarity bar (positive) noted on product
- ▶ Surface mount construction
- ▶ Halogen free epoxy
- ▶ RoHS compliance
- ▶ MSL3 packaging

Specifications

Item	Performance Characteristics	
Operating Temperature Range	-55°C ~ +105°C	
Rated Working Voltage Range	2V.DC ~ 16V.DC	
Nominal Capacitance Range	6.8μF ~ 560μF	
Capacitance Tolerance	±20% or -35% ~ +10% (120Hz, +20°C)	
DC Leakage Current	I ≤ 0.1CV (μA) 2 minutes (2V.DC ~ 8V.DC) I ≤ 0.3CV (μA) 2 minutes (≥10V.DC)	
tan δ	≤0.06 (120Hz, +20°C)	
Surge Voltage	Rated working voltage x 1.25 (+85°C)	
Endurance (+105°C, 1,000/2,000 hours, rated voltage applied)	Δ C/C	Within ±20% of the initial measured value
	tan δ	≤200% of the initial specified value
	LC	2V.DC ~ 6.3V.DC: ≤300% of the initial specified value 10V.DC ~ 16V.DC: ≤The initial specified value
Moisture Resistance After storing for 500 hours at 60°C, 90%RH	Δ C/C	Within -20% ~ +70% of the initial measured value
	tan δ	≤200% of the initial specified value
	LC	2V.DC ~ 6.3V.DC: ≤The initial specified value 10V.DC ~ 16V.DC: ≤200% of the initial specified value

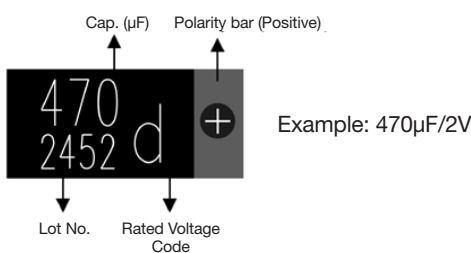
Recommendable Reflow Soldering Temperature 260°C



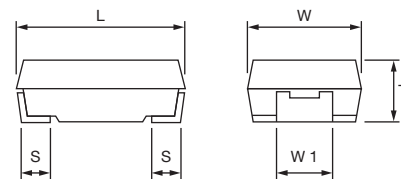
Part Number System

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	M	P	L	1	0	7	M	0	J	G	1	9	T	R	X	2	**	
	①			②			③	④		⑤			⑥		⑦	⑧		⑨
① Series	MPL						MPL											
② Capacitance	337			330μF														
③ Capacitance Tolerance	M/3			±20%/-35% ~ +10%														
④ Rated Voltage	0D			2V														
⑤ Case Size	G19			734319														
⑥ Packing	TR			Tape & Reel														
⑦ ESR Value	X			ESR Value														
⑧ Individual Specification Code	2/0			1,000/2,000 hours														
⑨ Special Requirement	**			Special Requirement														

Marking



External Dimensions



Case Size	EIA Code	L	W	T	W1	S
G11	7343	7.3±0.2	4.3±0.2	1.1±0.1	2.4±0.1	1.3±0.3
G19	7343	7.3±0.2	4.3±0.2	1.9±0.2	2.4±0.1	1.3±0.3
G28	7343	7.3±0.2	4.3±0.2	2.8±0.2	2.4±0.1	1.3±0.3

(Unit: mm)

Product Lineup

		Capacitance Value (μF)																												
		6.8		10		15		22		33		47		68		82		100		120										
Voltage (V.DC)	2																		G11 16	G19 16				Case Size G19 9 ESR (mΩ)						
	2.5																		G11 16	G19 16										
	4													G11 20	G19 20		G11 9	G19 9		G11 9	G19 9									
	6.3			G11 40	G19 40			G11 35	G19 35		G11 25	G19 25		G11 15/25	G19 15/25		G11 15/20	G19 15/20		G11 15/20	G19 15/20		G11 12/15/ 18		G19 12/15/ 18		G11 9/12/ 15	G19 9/12/ 15		
	10			G11 45	G19 45			G11 40	G19 40		G11 40	G19 40		G11 40	G19 40	G28 40	G11 40	G19 40		G19 40	G28 40				G19 40	G28 40		G19 35	G28 35	
	12.5			G11 55	G19 55	G11 45	G19 45	G11 30	G19 30		G11 25	G19 25	G28 25	G11 25	G19 25	G28 20	G11 25	G19 25	G28 20		G19 25	G28 20			G19 25	G28 20				
	16	G11 70	G19 70	G11 40	G19 40	G11 40	G19 40	G11 40	G19 40	G28 40	G11 40	G19 40	G28 40	G11 40	G19 40	G28 40		G19 40	G28 40		G19 40	G28 40								

		Capacitance Value (μF)																											
		150				180				220				270				330				390		470		560			
Voltage (V.DC)	2	G11 9	G19 9			G11 9	G19 9			G11 9/15	G19 9/15			G11 6/9/12	G19 6/9/12			G11 6/9/12	G19 4.5/6/ 9/12	G28 4.5/6/ 9/12	G19 4.5/6/ 9/12	G19 3/3.5/4.5/ 6/9/12	G28 3/3.5/4.5/ 6/9/12	G19 3/3.5/4.5/ 6/9/12	G28 3/3.5/4.5/ 6/9/12			Case Size G19 9 ESR (mΩ)	
	2.5	G11 9	G19 9	G28 9		G11 9	G19 9	G28 9		G11 9/15	G19 7/9/12	G28 7/9/12		G11 7/9/12	G19 7/9/12	G28 7/9/12			G19 4.5/6/ 9/12	G28 4.5/6/ 9/12	G19 4.5/6/ 9/12	G19 3/3.5/4.5/ 6/9/12	G28 3/3.5/4.5/ 6/9/12						
	4	G11 7/9/12	G19 7/9/12			G11 7/9/12	G19 7/9/12	G28 7/9/12		G11 7/9/12	G19 7/9/12	G28 7/9/12			G19 7/9/12				G19 7/9/12	G28 7/9/12									
	6.3	G11 9/12/15	G19 9/12/15	G28 9/12/15			G19 15				G19 15	G28 15								G19 15	G28 15								
10			G19 35	G28 35																									

Part Number Listing

XLPC Part Number (□ : ESR Value)	Rated Voltage (V.DC)	Cap. (μF) 120Hz/+20°C	Case Size			Cap. Tolerance %	ESR Max.(mΩ) 100kHz/+20°C						Ripple Current 100kHz/+20~105°C	MPQ & MOQ (pcs)	
			Code	L x W (mm)	T (mm)		C	E	A	R	X	H			
MPL107M0DG11TR□2**	2	100	G11	7343	1.1	±20%							16	2.0Arms	5,500
MPL107M0DG19TR□2**	2	100	G19	7343	1.9	±20%							16	2.0Arms	3,500
MPL157M0DG11TR□2**	2	150	G11	7343	1.1	±20%							9	3.0Arms	5,500
MPL157M0DG19TR□2**	2	150	G19	7343	1.9	±20%							9	3.0Arms	3,500
MPL187M0DG11TR□2**	2	180	G11	7343	1.1	±20%							9	2.7Arms	5,500
MPL187M0DG19TR□2**	2	180	G19	7343	1.9	±20%							9	2.7Arms	3,500
MPL227M0DG11TR□2**	2	220	G11	7343	1.1	±20%						9	15	3.0Arms	5,500
MPL227M0DG19TR□2**	2	220	G19	7343	1.9	±20%						9	15	3.0Arms	3,500
MPL277M0DG11TR□2**	2	270	G11	7343	1.1	±20%					6	9	12	3.0Arms	5,500
MPL277M0DG19TR□2**	2	270	G19	7343	1.9	±20%					6	9	12	3.0Arms	3,500
MPL33730DG11TR□2**	2	330	G11	7343	1.1	-35% ~ +10%					6	9	12	3.0Arms	5,500
MPL337M0DG19TR□2**	2	330	G19	7343	1.9	±20%				4.5	6	9	12	3.0Arms	3,500
MPL337M0DG28TR□2**	2	330	G28	7343	2.8	±20%				4.5	6	9	12	3.0Arms	3,000
MPL397M0DG19TR□2**	2	390	G19	7343	1.9	±20%				4.5	6	9	12	3.0Arms	3,500
MPL477M0DG19TR□2**	2	470	G19	7343	1.9	±20%	3	3.5	4.5	6	9	12	3.0Arms	3,500	
MPL477M0DG28TR□2**	2	470	G28	7343	2.8	±20%	3	3.5	4.5	6	9	12	3.0Arms	3,000	
MPL56730DG19TR□2**	2	560	G19	7343	1.9	-35% ~ +10%	3	3.5	4.5	6	9	12	3.0Arms	3,500	
MPL56730DG28TR□2**	2	560	G28	7343	2.8	-35% ~ +10%	3	3.5	4.5	6	9	12	3.0Arms	3,000	
MPL107M0EG11TR□2**	2.5	100	G11	7343	1.1	±20%							16	3.0Arms	5,500
MPL107M0EG19TR□2**	2.5	100	G19	7343	1.9	±20%							16	2.0Arms	3,500
MPL157M0EG11TR□2**	2.5	150	G11	7343	1.1	±20%							9	3.0Arms	5,500
MPL157M0EG19TR□2**	2.5	150	G19	7343	1.9	±20%							9	3.0Arms	3,500
MPL157M0EG28TR□2**	2.5	150	G28	7343	2.8	±20%							9	3.0Arms	3,000
MPL187M0EG11TR□2**	2.5	180	G11	7343	1.1	±20%							9	3.0Arms	5,500
MPL187M0EG19TR□2**	2.5	180	G19	7343	1.9	±20%							9	3.0Arms	3,500

XLPC Part Number (□ : ESR Value)	Rated Voltage	Cap. (μF)	Case Size			Cap. Tolerance	ESR Max.(mΩ) 100kHz/+20°C						Ripple Current	MPQ & MOQ	
	(VDC)	120Hz/+20°C	Code	L x W (mm)	T (mm)	%	C	E	A	R	X	H	100kHz/+20~105°C	(pcs)	
MPL187M0EG28TR□2**	2.5	180	G28	7343	2.8	±20%					9		3.0Arms	3,000	
MPL227M0EG11TR□2**	2.5	220	G11	7343	1.1	±20%					9	15	3.0Arms	5,500	
MPL227M0EG19TR□2**	2.5	220	G19	7343	1.9	±20%					7	9	12	3.0Arms	3,500
MPL227M0EG28TR□2**	2.5	220	G28	7343	2.8	±20%					7	9	12	3.0Arms	3,000
MPL27730EG11TR□2**	2.5	270	G11	7343	1.1	-35% ~ +10%					7	9	12	3.0Arms	5,500
MPL277M0EG19TR□2**	2.5	270	G19	7343	1.9	±20%					7	9	12	3.0Arms	3,500
MPL277M0EG28TR□2**	2.5	270	G28	7343	2.8	±20%					7	9	12	3.0Arms	3,000
MPL337M0EG19TR□2**	2.5	330	G19	7343	1.9	±20%			4.5	6	9	12	3.0Arms	3,500	
MPL337M0EG28TR□2**	2.5	330	G28	7343	2.8	±20%			4.5	6	9	12	3.0Arms	3,000	
MPL397M0EG19TR□2**	2.5	390	G19	7343	1.9	±20%			4.5	6	9	12	3.0Arms	3,500	
MPL477M0EG19TR□2**	2.5	470	G19	7343	1.9	±20%	3	3.5	4.5	6	9	12	3.0Arms	3,500	
MPL477M0EG28TR□2**	2.5	470	G28	7343	2.8	±20%	3	3.5	4.5	6	9	12	3.0Arms	3,000	
MPL686M0GG11TR□2**	4	68	G11	7343	1.1	±20%						20	1.9Arms	5,500	
MPL686M0GG19TR□2**	4	68	G19	7343	1.9	±20%						20	1.9Arms	3,500	
MPL826M0GG11TR□2**	4	82	G11	7343	1.1	±20%						9	3.0Arms	5,500	
MPL826M0GG19TR□2**	4	82	G19	7343	1.9	±20%						9	3.0Arms	3,500	
MPL107M0GG11TR□2**	4	100	G11	7343	1.1	±20%						9	3.0Arms	5,500	
MPL107M0GG19TR□2**	4	100	G19	7343	1.9	±20%						9	3.0Arms	3,500	
MPL157M0GG11TR□2**	4	150	G11	7343	1.1	±20%					7	9	12	3.0Arms	5,500
MPL157M0GG19TR□2**	4	150	G19	7343	1.9	±20%					7	9	12	3.0Arms	3,500
MPL187M0GG11TR□2**	4	180	G11	7343	1.1	±20%					7	9	12	3.0Arms	5,500
MPL187M0GG19TR□2**	4	180	G19	7343	1.9	±20%					7	9	12	3.0Arms	3,500
MPL187M0GG28TR□2**	4	180	G28	7343	2.8	±20%					7	9	12	3.0Arms	3,000
MPL22730GG11TR□2**	4	220	G11	7343	1.1	-35% ~ +10%					7	9	12	3.0Arms	5,500
MPL227M0GG19TR□2**	4	220	G19	7343	1.9	±20%					7	9	12	3.0Arms	3,500
MPL227M0GG28TR□2**	4	220	G28	7343	2.8	±20%					7	9	12	3.0Arms	3,000
MPL277M0GG19TR□2**	4	270	G19	7343	1.9	±20%					7	9	12	3.0Arms	3,500
MPL337M0GG19TR□2**	4	330	G19	7343	1.9	±20%					7	9	12	3.0Arms	3,500
MPL337M0GG28TR□2**	4	330	G28	7343	2.8	±20%					7	9	12	3.0Arms	3,000
MPL106M0JG11TR□2**	6.3	10	G11	7343	1.1	±20%						40	1.0Arms	5,500	
MPL106M0JG19TR□2**	6.3	10	G19	7343	1.9	±20%						40	1.0Arms	3,500	
MPL226M0JG11TR□2**	6.3	22	G11	7343	1.1	±20%						35	1.0Arms	5,500	
MPL226M0JG19TR□2**	6.3	22	G19	7343	1.9	±20%						35	1.0Arms	3,500	
MPL336M0JG11TR□2**	6.3	33	G11	7343	1.1	±20%						25	1.8Arms	5,500	
MPL336M0JG19TR□2**	6.3	33	G19	7343	1.9	±20%						25	1.8Arms	3,500	
MPL476M0JG11TR□2**	6.3	47	G11	7343	1.1	±20%					15	25	1.8Arms	5,500	
MPL476M0JG19TR□2**	6.3	47	G19	7343	1.9	±20%					15	25	1.8Arms	3,500	
MPL686M0JG11TR□2**	6.3	68	G11	7343	1.1	±20%					15	20	2.0Arms	5,500	
MPL686M0JG19TR□2**	6.3	68	G19	7343	1.9	±20%					15	20	2.0Arms	3,500	
MPL826M0JG11TR□2**	6.3	82	G11	7343	1.1	±20%					15	20	2.0Arms	5,500	
MPL826M0JG19TR□2**	6.3	82	G19	7343	1.9	±20%					15	20	2.0Arms	3,500	
MPL107M0JG11TR□2**	6.3	100	G11	7343	1.1	±20%					12	15	18	2.7Arms	5,500
MPL107M0JG19TR□2**	6.3	100	G19	7343	1.9	±20%					12	15	18	2.7Arms	3,500
MPL127M0JG11TR□2**	6.3	120	G11	7343	1.1	±20%					9	12	15	2.7Arms	5,500
MPL127M0JG19TR□2**	6.3	120	G19	7343	1.9	±20%					9	12	15	2.7Arms	3,500
MPL157M0JG11TR□2**	6.3	150	G11	7343	1.1	±20%					9	12	15	2.7Arms	5,500
MPL157M0JG19TR□2**	6.3	150	G19	7343	1.9	±20%					9	12	15	3.0Arms	3,500
MPL157M0JG28TR□2**	6.3	150	G28	7343	2.8	±20%					9	12	15	3.0Arms	3,000
MPL187M0JG19TR□2**	6.3	180	G19	7343	1.9	±20%						15		3.0Arms	3,500
MPL227M0JG19TR□2**	6.3	220	G19	7343	1.9	±20%						15		3.0Arms	3,500
MPL227M0JG28TR□2**	6.3	220	G28	7343	2.8	±20%						15		3.0Arms	3,000
MPL337M0JG19TR□2**	6.3	330	G19	7343	1.9	±20%						15		3.0Arms	3,500
MPL337M0JG28TR□2**	6.3	330	G28	7343	2.8	±20%						15		3.0Arms	3,000
MPL106M1AG11TR□2**	10	10	G11	7343	1.1	±20%						45	1.0Arms	5,500	
MPL106M1AG19TR□2**	10	10	G19	7343	1.9	±20%						45	1.0Arms	3,500	
MPL226M1AG11TR□2**	10	22	G11	7343	1.1	±20%						40	1.8Arms	5,500	
MPL226M1AG19TR□2**	10	22	G19	7343	1.9	±20%						40	1.8Arms	3,500	
MPL336M1AG11TR□2**	10	33	G11	7343	1.1	±20%						40	2.0Arms	5,500	
MPL336M1AG19TR□2**	10	33	G19	7343	1.9	±20%						40	2.0Arms	3,500	
MPL476M1AG11TR□2**	10	47	G11	7343	1.1	±20%						40	3.0Arms	5,500	
MPL476M1AG19TR□2**	10	47	G19	7343	1.9	±20%						40	3.0Arms	3,500	

XLPC Part Number (□ : ESR Value)	Rated Voltage	Cap. (μF)	Case Size			Cap. Tolerance	ESR Max.(mΩ) 100kHz/+20°C						Ripple Current	MPQ & MOQ
	(V.DC)	120Hz/+20°C	Code	L x W (mm)	T (mm)	%	C	E	A	R	X	H	100kHz/+20~105°C	(pcs)
MPL686M1AG11TR□2**	10	68	G11	7343	1.1	±20%						40	3.0Arms	5,500
MPL686M1AG19TR□2**	10	68	G19	7343	1.9	±20%						40	3.0Arms	3,500
MPL686M1AG28TR□2**	10	68	G28	7343	2.8	±20%						40	3.0Arms	3,000
MPL826M1AG11TR□2**	10	82	G11	7343	1.1	±20%						40	3.0Arms	5,500
MPL826M1AG19TR□2**	10	82	G19	7343	1.9	±20%						40	3.0Arms	3,500
MPL107M1AG19TR□2**	10	100	G19	7343	1.9	±20%						40	3.0Arms	3,500
MPL107M1AG28TR□2**	10	100	G28	7343	2.8	±20%						40	3.0Arms	3,000
MPL127M1AG19TR□2**	10	120	G19	7343	1.9	±20%						35	3.0Arms	3,500
MPL127M1AG28TR□2**	10	120	G28	7343	2.8	±20%						35	3.0Arms	3,000
MPL157M1AG19TR□2**	10	150	G19	7343	1.9	±20%						35	3.0Arms	3,500
MPL157M1AG28TR□2**	10	150	G28	7343	2.8	±20%						35	3.0Arms	3,000
MPL106M1BG11TR□2**	12.5	10	G11	7343	1.1	±20%						55	1.0Arms	5,500
MPL106M1BG19TR□2**	12.5	10	G19	7343	1.9	±20%						55	1.0Arms	3,500
MPL156M1BG11TR□2**	12.5	15	G11	7343	1.1	±20%						45	1.0Arms	5,500
MPL156M1BG19TR□2**	12.5	15	G19	7343	1.9	±20%						45	1.0Arms	3,500
MPL226M1BG11TR□2**	12.5	22	G11	7343	1.1	±20%						30	1.8Arms	5,500
MPL226M1BG19TR□2**	12.5	22	G19	7343	1.9	±20%						30	1.8Arms	3,500
MPL336M1BG11TR□2**	12.5	33	G11	7343	1.1	±20%						25	2.0Arms	5,500
MPL336M1BG19TR□2**	12.5	33	G19	7343	1.9	±20%						25	2.0Arms	3,500
MPL336M1BG28TR□2**	12.5	33	G28	7343	2.8	±20%						25	2.0Arms	3,000
MPL476M1BG11TR□2**	12.5	47	G11	7343	1.1	±20%						25	2.0Arms	5,500
MPL476M1BG19TR□2**	12.5	47	G19	7343	1.9	±20%						25	2.0Arms	3,500
MPL476M1BG28TR□2**	12.5	47	G28	7343	2.8	±20%						20	2.0Arms	3,000
MPL686M1BG11TR□2**	12.5	68	G11	7343	1.1	±20%						25	2.5Arms	5,500
MPL686M1BG19TR□2**	12.5	68	G19	7343	1.9	±20%						25	2.5Arms	3,500
MPL686M1BG28TR□2**	12.5	68	G28	7343	2.8	±20%						20	2.5Arms	3,000
MPL826M1BG19TR□2**	12.5	82	G19	7343	1.9	±20%						25	2.5Arms	3,500
MPL826M1BG28TR□2**	12.5	82	G28	7343	2.8	±20%						20	2.5Arms	3,000
MPL107M1BG19TR□2**	12.5	100	G19	7343	1.9	±20%						25	2.5Arms	3,500
MPL107M1BG28TR□2**	12.5	100	G28	7343	2.8	±20%						20	2.5Arms	3,000
MPL685M1CG11TR□2**	16	6.8	G11	7343	1.1	±20%						70	2.0Arms	5,500
MPL685M1CG19TR□2**	16	6.8	G19	7343	1.9	±20%						70	2.0Arms	3,500
MPL106M1CG11TR□2**	16	10	G11	7343	1.1	±20%						40	2.0Arms	5,500
MPL106M1CG19TR□2**	16	10	G19	7343	1.9	±20%						40	2.0Arms	3,500
MPL156M1CG11TR□2**	16	15	G11	7343	1.1	±20%						40	2.8Arms	5,500
MPL156M1CG19TR□2**	16	15	G19	7343	1.9	±20%						40	3.0Arms	3,500
MPL226M1CG11TR□2**	16	22	G11	7343	1.1	±20%						40	3.0Arms	5,500
MPL226M1CG19TR□2**	16	22	G19	7343	1.9	±20%						40	3.0Arms	3,500
MPL226M1CG28TR□2**	16	22	G28	7343	2.8	±20%						40	3.0Arms	3,000
MPL336M1CG11TR□2**	16	33	G11	7343	1.1	±20%						40	3.0Arms	5,500
MPL336M1CG19TR□2**	16	33	G19	7343	1.9	±20%						40	3.0Arms	3,500
MPL336M1CG28TR□2**	16	33	G28	7343	2.8	±20%						40	3.0Arms	3,000
MPL476M1CG11TR□2**	16	47	G11	7343	1.1	±20%						40	2.8Arms	5,500
MPL476M1CG19TR□2**	16	47	G19	7343	1.9	±20%						40	3.0Arms	3,500
MPL476M1CG28TR□2**	16	47	G28	7343	2.8	±20%						40	3.0Arms	3,000
MPL686M1CG19TR□2**	16	68	G19	7343	1.9	±20%						40	3.0Arms	3,500
MPL686M1CG28TR□2**	16	68	G28	7343	2.8	±20%						40	3.0Arms	3,000
MPL826M1CG19TR□2**	16	82	G19	7343	1.9	±20%						40	3.0Arms	3,500
MPL826M1CG28TR□2**	16	82	G28	7343	2.8	±20%						40	3.0Arms	3,000
MPL107M1CG19TR□2**	16	100	G19	7343	1.9	±20%						40	3.0Arms	3,500

All items are available in +10%-35% tolerance

Higher voltage ratings and tighter tolerance product including ESR may be substituted within the same size at XLPC's option. Voltage substitution will be marked with the higher voltage rating. Substitutions can include better than series.

Should a safety or technical concern arise regarding the product, please be sure to contact our sales offices or agents immediately.