

PM

Extremely Low Impedance, High Reliability

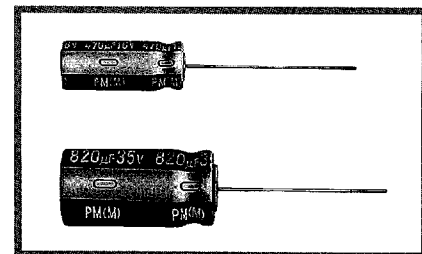
series



Low Impedance



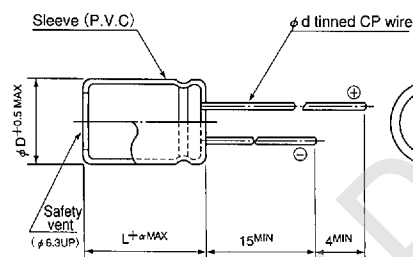
Long Life

Anti-Solvent
Feature
(Through 100V only)

- High reliability withstanding 5000hour load life at +105°C (3000/2000hours for smaller case sizes as specified below).
- Capacitance ranges available based on the numerical values in E12 series under JIS.

Specifications

Item	Performance Characteristics										
Operating Temperature Range	-55~+105°C (6.3~100V), -40~+105°C (160~400V), -25~+105°C (450V)										
Voltage Range	6.3~450V										
Capacitance Range	0.47~15000 μF										
Capacitance Tolerance	±20% at 120Hz, 20°C										
Leakage Current	Rated Voltage (V)	6.3~100						160~450			
	Leakage current	After 1 minute's application of rated voltage, leakage current is not more than 0.03CV or 4 (μA), whichever is greater.						CV≤1000 : I=0.1CV+40 (μA) max. (1 minute's) CV>1000 : I=0.04CV+100 (μA) max. (1 minute's)			
tan δ	For capacitance of more than 1000 μF, add 0.02 for every increase of 1000 μF. Measurement frequency : 120Hz, Temperature : 20°C										
	Rated Voltage (V)	6.3	10	16	25	35	50	63~100	160~350	400・450	
	tan δ (MAX.)	0.22	0.19	0.16	0.14	0.12	0.10	0.08	0.20	0.25	
Stability at Low Temperature	Rated voltage (V)		6.3・10	16	25・35	50~100	160~200	250	315~350	400	450
	Impedance ratio	Z-55°C/Z+20°C	4	3	3	2	—	—	—	—	—
		Z-40°C/Z+20°C	—	—	—	—	4	6	8	10	—
		Z-25°C/Z+20°C	—	—	—	—	—	—	—	—	15
Load Life	After an application of D.C. bias voltage plus the rated ripple current for 5000 hours (2000 hours for D = 5 and 6.3, 3000 hours for D=8) at 105°C the peak voltage shall not exceed the rated D.C. voltage, the capacitors meet the characteristic requirements shown on the right.										
	Capacitance change		Within ±20% of initial value								
	tan δ		200% or less of initial specified value								
	Leakage current		Initial specified value or less								
Shelf Life	After leaving capacitors under no load at 105°C for 1000 hours, they meet the characteristics requirements listed at right.										
	Capacitance change		Within ±20% of initial value								
	tan δ		150% or less of initial specified value								
	Leakage current		Initial specified value or less								
Marking	Printed with white color letter on dark brown sleeve.										
Applicable Standards	JIS C-5141 and JIS C-5102.										

Radial Lead Type

Type numbering system (Example: 25V 470 µF φ 12.5×15)

1 2 3 4 5 6 7 8 9 10 11 12
 U P M 1 E 4 7 1 M H H 6

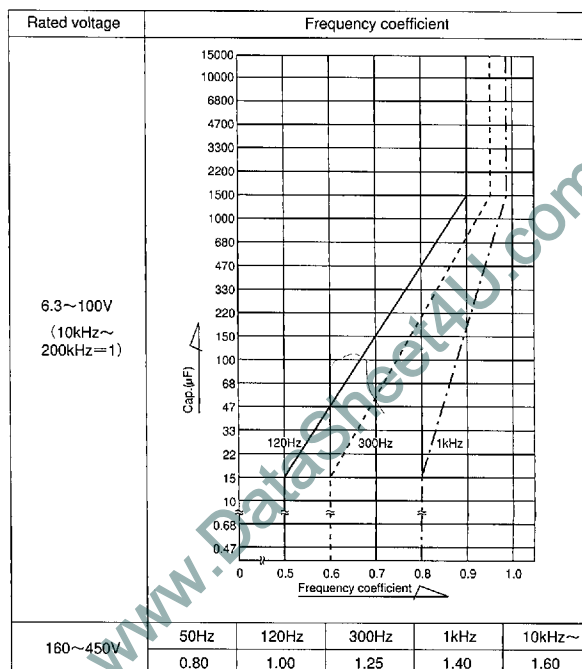
Configuration		Case size code	
Type	Code	Type	Code
Capacitance tolerance (±20%)	φ D	Small Dia	—
Capacitance (470 µF)	5	Low Profile	6
Rated voltage (25V)	6.3		
Series name	8 · 10		
	12.5~18		
	HH		

α	(φ D < 10)	1.5
	(φ D ≥ 10)	2.0

φ D	5	6.3	8	10	12.5	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
φ d	0.5	0.5	0.6	0.6	0.6	0.8	0.8

※ In case L > 25 for the φ 12.5 dia. unit, lead dia. φ d = 0.8mm.

- Frequency coefficient of allowable ripple current



• Dimension table in next pages.

PM series

■ Dimensions

Cap. (μF) \ V(Code) Code		6.3 (0J)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		DXL (mm)	
		—	6	—	6	—	6	—	6	—	6	—	6
22	220									5X11			
27	270									5X11			
33	330							5X11		6.3X11			
39	390							5X11		6.3X11			
47	470					5X11		6.3X11		6.3X11			
56	560					5X11		6.3X11		6.3X11			
68	680			5X11		6.3X11		6.3X11		6.3X15			
82	820			5X11		6.3X11		6.3X11		6.3X15			
100	101	5X11		6.3X11		6.3X11		6.3X15		8X11.5			
120	121	5X11		6.3X11		6.3X11		6.3X15		8X15	10X12.5		
150	151	6.3X11		6.3X11		6.3X15		8X11.5		8X15	10X12.5		
180	181	6.3X11		6.3X11		6.3X15		8X15	10X12.5	8X20	10X15		
220	221	6.3X11		6.3X15		8X11.5		8X15	10X12.5	8X20	10X15		
270	271	6.3X15		6.3X15		8X15	10X12.5	8X20	10X15	10X20	12.5X15		
330	331	6.3X15		8X11.5		8X15	10X12.5	8X20	10X15	10X20	12.5X15		
390	391	8X11.5		8X15	10X12.5	8X20	10X15	10X20	12.5X15	10X25	12.5X15		
470	471	8X15	10X12.5	8X15	10X12.5	8X20	10X15	10X20	12.5X15	10X31.5	16X15		
560	561	8X15	10X12.5	8X20	10X15	8X20	12.5X15	10X25	12.5X15	12.5X20	16X15		
680	681	8X20	10X15	8X20	10X15	10X20	12.5X15	10X31.5	16X15	12.5X25	18X15		
820	821	8X20	10X15	10X20	12.5X15	10X25	12.5X15	12.5X20	16X15	12.5X25	18X15		
1000	102	10X20	12.5X15	10X20	12.5X15	10X31.5	16X15	12.5X25	18X15	12.5X31.5	16X20		
1200	122	10X20	12.5X15	10X25	12.5X15	12.5X20	16X15	12.5X25	18X15	12.5X35.5	16X25		
1500	152	10X25	12.5X15	10X31.5	16X15	12.5X25	18X15	12.5X31.5	16X20	12.5X40	18X20		
1800	182	10X31.5	16X15	12.5X20	16X15	12.5X31.5	16X20	12.5X35.5	16X25	16X31.5	18X25		
2200	222	10X31.5	16X15	12.5X25	18X15	12.5X31.5	16X20	12.5X40	18X20	16X35.5	18X31.5		
2700	272	12.5X25	18X15	12.5X31.5	16X20	12.5X35.5	16X25	16X31.5	18X25	16X40	18X35.5		
3300	332	12.5X25	18X15	12.5X35.5	16X20	12.5X40	18X20	16X35.5	18X31.5	18X40			
3900	392	12.5X31.5	16X20	12.5X40	18X20	16X31.5	18X25	16X40	18X35.5				
4700	472	12.5X35.5	18X20	16X31.5	18X25	16X35.5	18X31.5	18X40					
5600	562	12.5X40	18X20	16X35.5	18X25	16X40	18X35.5						
6800	682	16X31.5	18X25	16X35.5	18X31.5	18X35.5							
8200	822	16X35.5	18X31.5	16X40	18X35.5	18X40							
10000	103	16X40	18X31.5	18X40									
12000	123	18X35.5											
15000	153	18X40											

Cap. (μF) \ V(Code) Code		50 (1H)		63 (1J)		80 (1K)		100 (2A)	
		—	6	—	6	—	6	—	6
0.47	R47	5X11						5X11	
0.68	R68	5X11						5X11	
1	010	5X11						5X11	
1.5	1R5	5X11						5X11	
2.2	2R2	5X11						5X11	
3.3	3R3	5X11						5X11	
4.7	4R7	5X11				5X11		6.3X11	
6.8	6R8	5X11				5X11		6.3X11	
10	100	5X11		5X11		6.3X11		6.3X11	
12	120	5X11		5X11		6.3X11		6.3X11	
15	150	5X11		6.3X11		6.3X11		6.3X15	
18	180	5X11		6.3X11		6.3X11		6.3X15	
22	220	6.3X11		6.3X11		6.3X15		8X11.5	
27	270	6.3X11		6.3X11		6.3X15		8X15	10X12.5
33	330	6.3X11		6.3X15		8X11.5		8X15	10X12.5
39	390	6.3X11		6.3X15		8X15	10X12.5	8X20	10X15
47	470	6.3X15		8X11.5		8X15	10X12.5	10X20	12.5X15
56	560	6.3X15		8X15	10X12.5	8X20	10X15	10X20	12.5X15
68	680	8X11.5		8X15	10X12.5	10X20	12.5X15	10X25	12.5X15
82	820	8X15	10X12.5	8X20	10X15	10X20	12.5X15	10X31.5	16X15
100	101	8X20	10X15	10X20	12.5X15	10X25	12.5X15	10X31.5	16X15
120	121	8X20	10X15	10X20	12.5X15	10X31.5	16X15	12.5X25	16X15
150	151	10X20	12.5X15	10X25	12.5X15	10X31.5	16X15	12.5X25	18X15
180	181	10X20	12.5X15	10X31.5	16X15	12.5X25	16X15	12.5X31.5	16X20
220	221	10X25	12.5X15	12.5X20	16X15	12.5X31.5	18X15	12.5X35.5	16X25
270	271	10X31.5	16X15	12.5X25	18X15	12.5X31.5	16X20	12.5X40	18X20
330	331	10X31.5	16X15	12.5X25	18X15	12.5X35.5	16X25	16X31.5	18X25
390	391	12.5X25	16X15	12.5X31.5	16X20	12.5X40	18X20	16X35.5	18X31.5
470	471	12.5X25	18X15	12.5X35.5	16X25	16X31.5	18X25	16X40	18X35.5
560	561	12.5X31.5	16X20	12.5X40	18X20	16X35.5	18X31.5	18X35.5	
680	681	12.5X35.5	16X20	16X31.5	18X25	16X40	18X31.5	18X40	
820	821	12.5X40	18X20	16X35.5	18X31.5	18X35.5			
1000	102	16X31.5	18X25	16X40	18X35.5	18X40			
1200	122	16X35.5	18X31.5	18X40					
1500	152	16X40	18X31.5						
1800	182	18X35.5							
2200	222	18X40							

*In case of low profile type, [6] will be put at 12th digit of type numbering system.

Dimension table for 160~450V products are shown in 63 page.

PM series

■ Standard ratings

Cap. (μF)		V(Code) Size code		6.3 (0J)									
				—				6					
				Case size φ D×L (mm)	Impedance (Ω MAX)		Allowable ripple (mA rms)		Case size φ D×L (mm)	Impedance (Ω MAX)		Allowable ripple (mA rms)	
					20°C/100kHz	-10°C/100kHz	105°C/10kHz~ 200kHz	105°C/120Hz		20°C/100kHz	-10°C/100kHz	105°C/10kHz~ 200kHz	105°C/120Hz
100	101	5×11			0.85	1.70	150	99					
120	121	5×11			0.65	1.30	175	115					
150	151	6.3×11			0.49	0.98	225	155					
180	181	6.3×11			0.39	0.78	250	175					
220	221	6.3×11			0.30	0.60	285	205					
270	271	6.3×15			0.24	0.48	370	275					
330	331	6.3×15			0.20	0.40	405	310					
390	391	8×11.5			0.17	0.34	445	345					
470	471	8×15			0.14	0.28	550	435	10×12.5	0.14	0.28	575	455
560	561	8×15			0.12	0.24	595	480	10×12.5	0.13	0.26	600	485
680	681	8×20			0.10	0.20	730	605	10×15	0.11	0.22	700	580
820	821	8×20			0.085	0.17	795	670	10×15	0.095	0.19	750	635
1000	102	10×20			0.075	0.15	950	820	12.5×15	0.085	0.17	890	765
1200	122	10×20			0.065	0.13	1020	895	12.5×15	0.075	0.15	950	835
1500	152	10×25			0.055	0.11	1220	1090	12.5×15	0.065	0.13	1020	915
1800	182	10×31.5			0.050	0.10	1370	1230	16×15	0.055	0.11	1270	1140
2200	222	10×31.5			0.043	0.086	1470	1320	16×15	0.049	0.098	1340	1200
2700	272	12.5×25			0.038	0.076	1590	1430	18×15	0.044	0.088	1500	1350
3300	332	12.5×25			0.034	0.068	1710	1530	18×15	0.039	0.078	1600	1440
3900	392	12.5×31.5			0.031	0.062	1910	1710	16×20	0.036	0.072	1720	1540
4700	472	12.5×35.5			0.028	0.056	2100	1890	18×20	0.032	0.064	1920	1720
5600	562	12.5×40			0.026	0.052	2270	2040	18×20	0.030	0.060	1980	1780
6800	682	16×31.5			0.024	0.048	2370	2130	18×25	0.027	0.054	2210	1980
8200	822	16×35.5			0.022	0.044	2550	2290	18×31.5	0.025	0.050	2390	2150
10000	103	16×40			0.020	0.040	2750	2470	18×31.5	0.023	0.046	2490	2240
12000	123	18×35.5			0.019	0.038	2820	2530					
15000	153	18×40			0.018	0.036	2960	2660					

Cap. (μF)		V(Code) Size code		10 (1A)									
				—				6					
				Case size φ D×L (mm)	Impedance (Ω MAX)		Allowable ripple (mA rms)		Case size φ D×L (mm)	Impedance (Ω MAX)		Allowable ripple (mA rms)	
					20°C/100kHz	-10°C/100kHz	105°C/10kHz~ 200kHz	105°C/120Hz		20°C/100kHz	-10°C/100kHz	105°C/10kHz~ 200kHz	105°C/120Hz
68	680	5×11			0.80	1.60	155	97					
82	820	5×11			0.65	1.30	175	110					
100	101	6.3×11			0.55	1.10	210	135					
120	121	6.3×11			0.44	0.88	235	160					
150	151	6.3×11			0.35	0.70	265	185					
180	181	6.3×11			0.29	0.58	290	205					
220	221	6.3×15			0.24	0.48	370	270					
270	271	6.3×15			0.20	0.40	405	300					
330	331	8×11.5			0.16	0.32	460	350					
390	391	8×15			0.14	0.28	550	430	10×12.5	0.15	0.30	555	430
470	471	8×15			0.12	0.24	595	475	10×12.5	0.13	0.26	600	475
560	561	8×20			0.10	0.20	730	590	10×15	0.11	0.22	700	565
680	681	8×20			0.085	0.17	795	660	10×15	0.090	0.18	770	635
820	821	10×20			0.070	0.14	985	835	12.5×15	0.080	0.16	920	780
1000	102	10×20			0.060	0.12	1060	915	12.5×15	0.065	0.13	1040	895
1200	122	10×25			0.050	0.10	1280	1120	12.5×15	0.060	0.12	1060	930
1500	152	10×31.5			0.045	0.090	1440	1290	16×15	0.050	0.10	1330	1190
1800	182	12.5×20			0.039	0.078	1470	1320	16×15	0.044	0.088	1420	1270
2200	222	12.5×25			0.034	0.068	1710	1530	18×15	0.039	0.078	1600	1440
2700	272	12.5×31.5			0.030	0.060	1940	1740	16×20	0.035	0.070	1740	1560
3300	332	12.5×35.5			0.026	0.052	2180	1960	16×20	0.031	0.062	1850	1660
3900	392	12.5×40			0.024	0.048	2360	2120	18×20	0.028	0.056	2050	1840
4700	472	16×31.5			0.023	0.046	2420	2170	18×25	0.026	0.052	2250	2020
5600	562	16×35.5			0.021	0.042	2610	2340	18×25	0.024	0.048	2340	2100
6800	682	16×35.5			0.020	0.040	2680	2410	18×31.5	0.022	0.044	2540	2280
8200	822	16×40			0.019	0.038	2820	2530	18×35.5	0.021	0.042	2690	2420
10000	103	18×40			0.017	0.034	3040	2730					

※In case of low profile type, ⑥ will be put at 12th digit of type numbering system.

PM series

■ Standard ratings

Cap. (μF)		V (Code) Size Code Item Code		16 (1C)									
				—				6					
				Case size φ D×L (mm)	Impedance (Ω MAX)		Allowable ripple (mA rms)		Case size φ D×L (mm)	Impedance (Ω MAX)		Allowable ripple (mA rms)	
					20°C/100kHz	-10°C/100kHz	105°C/10kHz~ 200kHz	105°C/120Hz		20°C/100kHz	-10°C/100kHz	105°C/10kHz~ 200kHz	105°C/120Hz
47	470			5×11	0.80	1.60	155	92					
56	560			5×11	0.65	1.30	175	105					
68	680			6.3×11	0.50	1.00	220	135					
82	820			6.3×11	0.42	0.84	240	155					
100	101			6.3×11	0.35	0.70	265	175					
120	121			6.3×11	0.29	0.58	290	195					
150	151			6.3×15	0.23	0.46	375	260					
180	181			6.3×15	0.20	0.40	405	285					
220	221			8×11.5	0.16	0.32	460	335					
270	271			8×15	0.14	0.28	550	410	10×12.5	0.14	0.28	575	430
330	331			8×15	0.12	0.24	595	455	10×12.5	0.12	0.24	625	480
390	391			8×20	0.10	0.20	730	570	10×15	0.10	0.20	730	570
470	471			8×20	0.090	0.18	770	615	10×15	0.090	0.18	770	615
560	561			10×20	0.075	0.15	950	770	12.5×15	0.080	0.16	920	745
680	681			10×20	0.065	0.13	1020	845	12.5×15	0.070	0.14	985	815
820	821			10×25	0.055	0.11	1220	1030	12.5×15	0.060	0.12	1060	895
1000	102			10×31.5	0.047	0.094	1410	1210	16×15	0.055	0.11	1270	1090
1200	122			12.5×20	0.041	0.082	1430	1250	16×15	0.046	0.092	1390	1220
1500	152			12.5×25	0.036	0.072	1660	1490	18×15	0.041	0.082	1560	1400
1800	182			12.5×31.5	0.032	0.064	1880	1690	16×20	0.037	0.074	1700	1530
2200	222			12.5×31.5	0.028	0.056	2010	1800	16×20	0.033	0.066	1800	1620
2700	272			12.5×35.5	0.025	0.050	2220	1990	16×25	0.030	0.060	2010	1800
3300	332			12.5×40	0.023	0.046	2410	2160	18×20	0.027	0.054	2090	1880
3900	392			16×31.5	0.022	0.044	2470	2220	18×25	0.025	0.050	2290	2060
4700	472			16×35.5	0.020	0.040	2680	2410	18×31.5	0.023	0.046	2490	2240
5600	562			16×40	0.019	0.038	2820	2530	18×35.5	0.022	0.044	2620	2350
6800	682			18×35.5	0.018	0.036	2900	2610					
8200	822			18×40	0.017	0.034	3040	2730					

Cap. (μF)		V (Code) Size Code Item Code		25 (1E)									
				—				6					
				Case size φ D×L (mm)	Impedance (Ω MAX)		Allowable ripple (mA rms)		Case size φ D×L (mm)	Impedance (Ω MAX)		Allowable ripple (mA rms)	
					20°C/100kHz	-10°C/100kHz	105°C/10kHz~ 200kHz	105°C/120Hz		20°C/100kHz	-10°C/100kHz	105°C/10kHz~ 200kHz	105°C/120Hz
33	330			5×11	0.80	1.60	155	88					
39	390			5×11	0.65	1.30	175	100					
47	470			6.3×11	0.55	1.10	210	125					
56	560			6.3×11	0.44	0.88	235	140					
68	680			6.3×11	0.36	0.72	260	160					
82	820			6.3×11	0.30	0.60	285	180					
100	101			6.3×15	0.24	0.48	370	245					
120	121			6.3×15	0.20	0.40	405	275					
150	151			8×11.5	0.16	0.32	460	320					
180	181			8×15	0.14	0.28	550	390	10×12.5	0.15	0.30	555	395
220	221			8×15	0.11	0.22	625	455	10×12.5	0.13	0.26	600	435
270	271			8×20	0.095	0.19	750	560	10×15	0.11	0.22	700	525
330	331			8×20	0.085	0.17	795	610	10×15	0.095	0.19	750	575
390	391			10×20	0.070	0.14	985	770	12.5×15	0.080	0.16	920	720
470	471			10×20	0.065	0.13	1020	810	12.5×15	0.070	0.14	985	785
560	561			10×25	0.055	0.11	1220	990	12.5×15	0.060	0.12	1060	860
680	681			10×31.5	0.046	0.092	1420	1180	16×15	0.055	0.11	1270	1050
820	821			12.5×20	0.041	0.082	1430	1210	16×15	0.049	0.098	1340	1130
1000	102			12.5×25	0.036	0.072	1660	1430	18×15	0.043	0.086	1520	1310
1200	122			12.5×25	0.032	0.064	1760	1550	18×15	0.039	0.078	1600	1400
1500	152			12.5×31.5	0.029	0.058	1980	1780	16×20	0.034	0.068	1770	1590
1800	182			12.5×35.5	0.026	0.052	2180	1960	16×25	0.031	0.062	1980	1780
2200	222			12.5×40	0.024	0.048	2360	2120	18×20	0.028	0.056	2050	1840
2700	272			16×31.5	0.022	0.044	2470	2220	18×25	0.025	0.050	2290	2060
3300	332			16×35.5	0.020	0.040	2680	2410	18×31.5	0.023	0.046	2490	2240
3900	392			16×40	0.019	0.038	2820	2530	18×35.5	0.021	0.042	2690	2420
4700	472			18×40	0.018	0.036	2960	2660					

※ In case of low profile type, [6] will be put at 12th digit of type numbering system.

PM

series

■ Standard ratings

Cap. (μF)		V (Code) Size code Item Code		35 (1V)									
				—						6			
				Case size φ D×L (mm)	Impedance (Ω MAX.)		Allowable ripple (mA rms)		Case size φ D×L (mm)	Impedance (Ω MAX.)		Allowable ripple (mA rms)	
					20℃/100kHz	−10℃/100kHz	105℃/10kHz~ 200kHz	105℃/120Hz		20℃/100kHz	−10℃/100kHz	105℃/10kHz~ 200kHz	105℃/120Hz
22	220	5×11	0.75	1.50	160	85							
27	270	5×11	0.60	1.20	180	99							
33	330	6.3×11	0.49	0.98	225	125							
39	390	6.3×11	0.41	0.82	245	140							
47	470	6.3×11	0.34	0.68	270	160							
56	560	6.3×11	0.28	0.56	295	180							
68	680	6.3×15	0.24	0.48	370	230							
82	820	6.3×15	0.19	0.38	415	265							
100	101	8×11.5	0.16	0.32	460	305							
120	121	8×15	0.14	0.28	550	370	10×12.5	0.15	0.30	555	375		
150	151	8×15	0.12	0.24	595	415	10×12.5	0.12	0.24	625	435		
180	181	8×20	0.10	0.20	730	520	10×15	0.11	0.22	700	500		
220	221	8×20	0.085	0.17	795	580	10×15	0.090	0.18	770	560		
270	271	10×20	0.070	0.14	985	735	12.5×15	0.080	0.16	920	690		
330	331	10×20	0.060	0.12	1060	810	12.5×15	0.065	0.13	1020	780		
390	391	10×25	0.055	0.11	1220	955	12.5×15	0.060	0.12	1060	825		
470	471	10×31.5	0.046	0.092	1420	1130	16×15	0.055	0.11	1270	1010		
560	561	12.5×20	0.041	0.082	1430	1160	16×15	0.048	0.096	1360	1100		
680	681	12.5×25	0.036	0.072	1660	1370	18×15	0.042	0.084	1540	1270		
820	821	12.5×25	0.032	0.064	1760	1490	18×15	0.038	0.076	1620	1370		
1000	102	12.5×31.5	0.029	0.058	1980	1710	16×20	0.034	0.068	1770	1530		
1200	122	12.5×35.5	0.026	0.052	2180	1920	16×25	0.031	0.062	1980	1740		
1500	152	12.5×40	0.024	0.048	2360	2120	18×20	0.028	0.056	2050	1840		
1800	182	16×31.5	0.022	0.044	2470	2220	18×25	0.025	0.050	2290	2060		
2200	222	16×35.5	0.020	0.040	2680	2410	18×31.5	0.023	0.046	2490	2240		
2700	272	16×40	0.018	0.036	2900	2610	18×35.5	0.021	0.042	2690	2420		
3300	332	18×40	0.017	0.034	3040	2730							

Cap. (μF)		V (Code) Size code Item Code		50 (1H)									
				—						6			
				Case size φ D×L (mm)	Impedance (Ω MAX.)		Allowable ripple (mA rms)		Case size φ D×L (mm)	Impedance (Ω MAX.)		Allowable ripple (mA rms)	
					20℃/100kHz	−10℃/100kHz	105℃/10kHz~ 200kHz	105℃/120Hz		20℃/100kHz	−10℃/100kHz	105℃/10kHz~ 200kHz	105℃/120Hz
0.47	R47	5×11	23.0	46.0	22	11							
0.68	R68	5×11	16.0	32.0	28	14							
1	010	5×11	11.0	22.0	36	18							
1.5	1R5	5×11	7.50	15.0	45	22							
2.2	2R2	5×11	5.00	10.0	54	27							
3.3	3R3	5×11	3.30	6.60	66	33							
4.7	4R7	5×11	2.20	4.40	81	40							
6.8	6R8	5×11	1.80	3.60	91	45							
10	100	5×11	1.40	2.80	115	57							
12	120	5×11	1.20	2.40	125	62							
15	150	5×11	0.93	1.86	145	72							
18	180	5×11	0.80	1.60	155	79							
22	220	6.3×11	0.65	1.30	195	100							
27	270	6.3×11	0.53	1.06	215	115							
33	330	6.3×11	0.43	0.86	240	135							
39	390	6.3×11	0.36	0.72	260	150							
47	470	6.3×15	0.30	0.60	330	195							
56	560	6.3×15	0.25	0.50	360	220							
68	680	8×11.5	0.20	0.40	410	255							
82	820	8×15	0.17	0.34	500	320	10×12.5	0.18	0.36	510	330		
100	101	8×20	0.14	0.28	620	410	10×15	0.16	0.32	580	385		
120	121	8×20	0.12	0.24	670	455	10×15	0.13	0.26	640	435		
150	151	10×20	0.10	0.20	820	570	12.5×15	0.11	0.22	785	545		
180	181	10×20	0.085	0.17	890	635	12.5×15	0.095	0.19	845	605		
220	221	10×25	0.075	0.15	1040	760	12.5×15	0.080	0.16	920	670		
270	271	10×31.5	0.065	0.13	1200	900	16×15	0.070	0.14	1120	840		
330	331	10×31.5	0.055	0.11	1300	995	16×15	0.060	0.12	1210	925		
390	391	12.5×25	0.048	0.096	1440	1120	16×15	0.055	0.11	1270	990		
470	471	12.5×25	0.044	0.088	1500	1190	18×15	0.046	0.092	1470	1170		
560	561	12.5×31.5	0.040	0.080	1680	1360	16×20	0.044	0.088	1550	1260		
680	681	12.5×35.5	0.036	0.072	1850	1530	16×20	0.040	0.080	1630	1350		
820	821	12.5×40	0.033	0.066	2010	1700	18×20	0.036	0.072	1810	1530		
1000	102	16×31.5	0.030	0.060	2120	1830	18×25	0.033	0.066	2000	1730		
1200	122	16×35.5	0.028	0.056	2260	1990	18×31.5	0.031	0.062	2140	1880		
1500	152	16×40	0.026	0.052	2410	2170	18×31.5	0.029	0.058	2220	1990		
1800	182	18×35.5	0.025	0.050	2460	2210							
2200	222	18×40	0.024	0.048	2560	2300							

※ In case of low profile type, [6] will be put at 12th digit of type numbering system.

PM series

■ Standard ratings

Cap. (μF)		V(Code) Size code		63 (1J)										
				6										
				Item	Case size φ D×L (mm)	Impedance (Ω MAX.)		Allowable ripple (mA rms)		Case size φ D×L (mm)	Impedance (Ω MAX.)		Allowable ripple (mA rms)	
						20℃/100kHz	−10℃/100kHz	105℃/10kHz~ 200kHz	105℃/120Hz		20℃/100kHz	−10℃/100kHz	105℃/10kHz~ 200kHz	105℃/120Hz
10	100	5×11	1.06	2.12	135	67								
12	120	5×11	0.93	1.86	145	72								
15	150	6.3×11	0.73	1.46	185	92								
18	180	6.3×11	0.63	1.26	195	100								
22	220	6.3×11	0.52	1.04	215	110								
27	270	6.3×11	0.43	0.86	240	130								
33	330	6.3×15	0.35	0.70	305	170								
39	390	6.3×15	0.30	0.60	330	190								
47	470	8×11.5	0.25	0.50	365	215								
56	560	8×15	0.21	0.42	450	275	10×12.5	0.23	0.46	450	275			
68	680	8×15	0.17	0.34	500	315	10×12.5	0.19	0.38	495	310			
82	820	8×20	0.15	0.30	600	385	10×15	0.16	0.32	580	375			
100	101	10×20	0.12	0.24	750	495	12.5×15	0.14	0.28	695	460			
120	121	10×20	0.10	0.20	820	555	12.5×15	0.12	0.24	750	510			
150	151	10×25	0.090	0.18	950	665	12.5×15	0.095	0.19	845	590			
180	181	10×31.5	0.075	0.15	1110	790	16×15	0.080	0.16	1050	750			
220	221	12.5×20	0.065	0.13	1140	835	16×15	0.070	0.14	1120	820			
270	271	12.5×25	0.055	0.11	1340	1000	18×15	0.060	0.12	1290	965			
330	331	12.5×25	0.049	0.098	1420	1090	18×15	0.050	0.10	1410	1080			
390	391	12.5×31.5	0.043	0.086	1620	1260	16×20	0.047	0.094	1500	1170			
470	471	12.5×35.5	0.039	0.078	1780	1420	16×25	0.042	0.084	1700	1350			
560	561	12.5×40	0.035	0.070	1950	1580	18×20	0.039	0.078	1730	1400			
680	681	16×31.5	0.032	0.064	2050	1700	18×25	0.035	0.070	1940	1610			
820	821	16×35.5	0.029	0.058	2220	1880	18×31.5	0.032	0.064	2110	1780			
1000	102	16×40	0.027	0.054	2370	2050	18×35.5	0.029	0.058	2280	1970			
1200	122	18×40	0.025	0.050	2510	2210								

Cap. (μ F)		V (Code) Size code		80 (1K)									
		Item	Code	Case size φ D×L (mm)	Impedance (Ω MAX.)		Allowable ripple (mA rms)		Case size φ D×L (mm)	Impedance (Ω MAX.)		Allowable ripple (mA rms)	
					20℃/100kHz	—10℃/100kHz	105℃/10kHz ~ 200kHz	105℃/120Hz		20℃/100kHz	—10℃/100kHz	105℃/10kHz ~ 200kHz	105℃/120Hz
4.7	4R7	5×11	4.20	11.00	53	26							
6.8	6R8	5×11	2.60	7.00	68	34							
10	100	6.3×11	1.70	4.60	87	43							
12	120	6.3×11	1.40	3.80	96	48							
15	150	6.3×11	1.20	3.20	104	52							
18	180	6.3×11	1.00	2.70	114	58							
22	220	6.3×15	0.77	2.10	135	71							
27	270	6.3×15	0.63	1.70	149	80							
33	330	8×11.5	0.53	1.40	234	132							
39	390	8×15	0.46	1.20	272	156	10×12.5	0.49	1.30	271	155		
47	470	8×15	0.39	1.10	295	175	10×12.5	0.42	1.10	293	174		
56	560	8×20	0.34	0.92	347	208	10×15	0.36	0.97	337	202		
68	680	10×20	0.28	0.76	426	264	12.5×15	0.31	0.84	402	249		
82	820	10×20	0.25	0.68	447	284	12.5×15	0.27	0.73	430	273		
100	101	10×25	0.21	0.57	526	347	12.5×15	0.23	0.62	466	308		
120	121	10×31.5	0.18	0.49	606	406	16×15	0.20	0.54	663	444		
150	151	10×31.5	0.15	0.41	663	459	16×15	0.18	0.47	699	484		
180	181	12.5×25	0.13	0.35	734	520	16×15	0.15	0.41	766	543		
220	221	12.5×31.5	0.12	0.32	816	595	18×15	0.13	0.35	881	643		
270	271	12.5×31.5	0.10	0.27	894	667	16×20	0.11	0.30	995	742		
330	331	12.5×35.5	0.088	0.24	1000	767	16×25	0.099	0.27	1140	874		
390	391	12.5×40	0.078	0.21	1060	822	18×20	0.089	0.24	1170	908		
470	471	16×31.5	0.069	0.19	1450	1150	18×25	0.080	0.22	1330	1060		
560	561	16×35.5	0.062	0.17	1600	1300	18×31.5	0.072	0.19	1490	1210		
680	681	16×40	0.055	0.15	1770	1470	18×31.5	0.065	0.18	1560	1300		
820	821	18×35.5	0.049	0.13	1890	1590							
1000	102	18×40	0.044	0.12	2080	1790							

※ In case of low profile type, [6] will be put at 12th digit of type numbering system.

PM series

■ Standard ratings

Cap. (μF)		V (Code) Size code Item Code		100 (2A)									
				—				6					
				Case size φ D×L (mm)	Impedance (Ω MAX.)		Allowable ripple (mA rms)		Case size φ D×L (mm)	Impedance (Ω MAX.)		Allowable ripple (mA rms)	
					20°C/100kHz	—10°C/100kHz	105°C/10kHz ~ 200kHz	105°C/120Hz		20°C/100kHz	—10°C/100kHz	105°C/10kHz ~ 200kHz	105°C/120Hz
0.47	R47	5×11			43.0	116.0	17	8					
0.68	R68	5×11			23.0	62.0	23	11					
1	010	5×11			17.0	46.0	27	13					
1.5	1R5	5×11			10.0	27.0	35	17					
2.2	2R2	5×11			6.60	18.0	43	21					
3.3	3R3	5×11			4.10	11.0	54	27					
4.7	4R7	6.3×11			2.80	7.60	68	34					
6.8	6R8	6.3×11			1.90	5.10	83	41					
10	100	6.3×11			1.20	3.20	104	52					
12	120	6.3×11			1.00	2.70	114	57					
15	150	6.3×15			0.81	2.20	131	65					
18	180	6.3×15			0.67	1.80	155	73					
22	220	8×11.5			0.55	1.50	230	122					
27	270	8×15			0.47	1.30	269	146	10×12.5	0.50	1.40	268	145
33	330	8×15			0.38	1.00	299	169	10×12.5	0.42	1.10	293	166
39	390	8×20			0.33	0.89	352	202	10×15	0.36	0.97	337	193
47	470	10×20			0.28	0.76	423	252	12.5×15	0.31	0.84	402	239
56	560	10×20			0.24	0.65	456	274	12.5×15	0.27	0.73	430	258
68	680	10×25			0.21	0.57	526	326	12.5×15	0.23	0.62	466	289
82	820	10×31.5			0.18	0.49	606	386	16×15	0.19	0.51	681	433
100	101	10×31.5			0.15	0.41	663	438	16×15	0.17	0.46	719	475
120	121	12.5×25			0.13	0.35	774	519	16×15	0.14	0.38	793	531
150	151	12.5×25			0.11	0.30	798	553	18×15	0.12	0.32	917	635
180	181	12.5×31.5			0.098	0.26	904	641	16×20	0.11	0.30	995	706
220	221	12.5×35.5			0.087	0.23	1000	730	16×25	0.093	0.25	1170	854
270	271	12.5×40			0.072	0.19	1130	843	18×20	0.080	0.22	1230	918
330	331	16×31.5			0.062	0.17	1520	1160	18×25	0.070	0.19	1420	1080
390	391	16×35.5			0.053	0.14	1730	1340	18×31.5	0.062	0.17	1600	1240
470	471	16×40			0.047	0.13	1920	1530	18×35.5	0.056	0.15	1770	1410
560	561	18×35.5			0.041	0.11	2070	1680					
680	681	18×40			0.036	0.097	2300	1910					

※ In case of low profile type, 6 will be put at 12th digit of type numbering system.

Cap. (μF)		V (Code)		160		200		250		315		350		400		450	
		Code		2C		2D		2E		2F		2V		2G		2W	
1	010	8×11.5	19	8×11.5	19	8×11.5	19	8×11.5	19	8×11.5	19	10×12.5	21	10×12.5	17	10×15	17
2.2	2R2	8×11.5	30	8×11.5	30	10×12.5	32	10×12.5	32	10×12.5	32	10×15	34	10×15	28	10×20	28
3.3	3R3	10×12.5	50	10×12.5	50	10×15	52	10×15	52	10×15	52	10×20	54	10×20	47	12.5×20	48
4.7	4R7	10×12.5	57	10×15	60	10×15	60	10×15	60	10×20	65	10×20	65	12.5×20	55	12.5×25	55
10	100	10×15	90	10×20	95	12.5×20	98	12.5×20	98	12.5×20	98	12.5×25	100	12.5×25	85	16×25	90
22	220	12.5×20	140	12.5×25	145	16×25	150	16×25	150	16×25	150	16×25	150	16×31.5	130	16×35.5	135
33	330	12.5×25	175	16×25	180	16×25	180	16×31.5	185	16×31.5	185	16×35.5	190	18×35.5	170	18×40	170
47	470	16×25	220	16×25	220	16×31.5	225	18×35.5	235	18×40	240						
100	101	16×35.5	330	18×40	345	18×40	345									Case size	※

※ Allowable Ripple (mA rms) at 105°C 120Hz