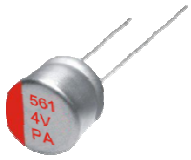
PA Radial Lead Type, Standard Series

- Low ESR, High ripple current.
- Load life of 2000 hours at 105℃.
- Radial lead type:lead free flow soldering condition correspondence.
- RoHS Compliance(2011/65/EU).



■SPECIFICATIONS

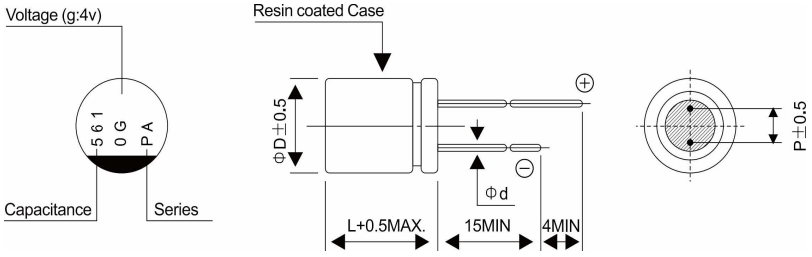
Item	Performance Characteristics		
Category Temperature Range	-55 ~ +105℃		
Rated Voltage Range	2.5 ~ 25V		
Rated Capacitance Range	6.8 to 1500μF		
Capacitance Tolerance	± 20 % (at 120Hz , 20℃)		
Tangent of loss angle (tan δ)	Less than or equal to the specified value at 120Hz, 20℃		
ESR(※1)	Less than or equal to the specified value at 100KHz, 20℃		
Leakage Current(※2)	Less than or equal to the specified value. After 2 minutes' application of rated voltage at 20℃		
Temperature Characteristics (Max. Impedance Ratio)	Z+105℃ / Z+20℃ ≤1.25 (100kHz) Z- 55℃ / Z+20℃ ≤1.25		
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20 ℃ after the rated voltage is applied for 2000 hours at 105 ℃	Capacitance change	Within ±20% of the initial capacitance value(※3)
		tan δ	150% or less than the initial specified value
		ESR(※1)	150% or less than the initial specified value
		Leakage current(※2)	less than or equal to the initial specified value
Damp Heat (Steady State)	The specifications listed at right shall be met when the capacitors are restored to 20 ℃ after the rated voltage is applied for 1000 hours at 60 ℃, 90% RH.	Capacitance change	Within ±20% of the initial capacitance value(※3)
		tan δ	150% or less than the initial specified value
		ESR(※1)	150% or less than the initial specified value
		Leakage current(※2)	less than or equal to the initial specified value
Resistance to Soldering Heat	After soldering the capacitor under the soldering conditions prescribed here as preheat at 150 to 200℃ for 60 to 180 seconds and peak temperature at 265℃ for 10 seconds or less,the capacitor shall meet the specifications listed at right, provided that its temperature profile is measured at both of terminal ends facing the soldering side.	Capacitance change	Within ±10% of the initial capacitance value(※3)
		tan δ	130% or less than the initial specified value
		ESR(※1)	130% or less than the initial specified value
		Leakage current(※2)	less than or equal to the initial specified value
Marking	Red print on the case top		

※1 ESR should be measured at both of the terminal ends closest to the capacitor body.

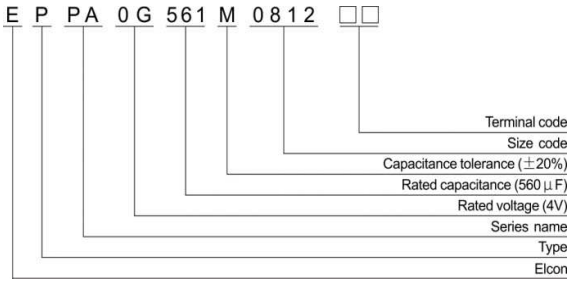
※2 Conditioning: If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minuters at 105 ℃

※3 Initial value: The value before test of examination of resistance to soldering.

■ Dimensions



Type numbering system(Exp:4V 560μF)



Φ x L(mm)

Size	6.3x6	6.3x9	6.3x10.5	8x7	8x9	8x12	10x8	10x10	10x13
ΦD	6.3	6.3	6.3	8.0	8.0	8.0	10.0	10.0	10.0
L	5.5	8.5	10.0	6.5	8.5	11.5	7.5	9.5	12.5
P	2.5	2.5	2.5	3.5	3.5	3.5	5.0	5.0	5.0
Φd	0.5	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.6

Voltage

V	2.5	4	6.3	10	16	20	25
Code	0E	0G	0J	1A	1C	1D	1E

PA Series

■STANDARD RATINGS

Rated voltage (V)(code)	Surge Voltage (V)	Rated Cpacitance (μF)	Case Size ΦD x L(mm)	tan δ	Leakage Current (μA)	ESR(mΩ) (at 100kHz 20℃)	Rated Ripple (mArms)	Part Number
2.5 (0E)	2.8	330	6.3x9	0.08	500	7	5600	EPPA0E331M6309
		390	6.3x10.5	0.08	195	20	3200	EPPA0E391M6310
		560	6.3x9	0.08	500	7	5600	EPPA0E561M6309
		560	8x9	0.08	280	6	4800	EPPA0E561M0809
		680	8x9	0.08	340	7	4800	EPPA0E681M0809
		680	8x12	0.08	340	6	5700	EPPA0E681M0812
		820	6.3x9	0.08	500	7	5600	EPPA0E821M6309
		820	8x9	0.08	410	7	5200	EPPA0E821M0809
		820	8x12	0.08	410	6	6200	EPPA0E821M0812
		1000	10x13	0.08	500	6	6500	EPPA0E102M1013
		1200	10x13	0.08	600	8	5300	EPPA0E122M1013
		1500	8x12	0.08	750	7	6100	EPPA0E152M0812
		1500	10x13	0.08	750	8	5500	EPPA0E152M1013
4 (0G)	4.6	270	6.3x9	0.08	500	7	5600	EPPA0G271M6309
		270	6.3x10.5	0.08	216	20	3200	EPPA0G271M6310
		390	6.3x10.5	0.08	312	24	3300	EPPA0G391M6310
		560	8x9	0.08	448	7	5200	EPPA0G561M0809
		560	8x12	0.08	448	7	5500	EPPA0G561M0812
		680	8x12	0.08	544	6	6200	EPPA0G681M0812
		820	10x13	0.08	656	6	6500	EPPA0G821M1013
		1000	10x13	0.08	800	6	6640	EPPA0G102M1013
		1200	10x13	0.08	960	8	5600	EPPA0G122M1013
6.3 (0J)	7.2	220	6.3x10.5	0.08	277	20	3200	EPPA0J221M6310
		330	6.3x10.5	0.08	416	24	3300	EPPA0J331M6310
		470	8x9	0.08	592	7	5200	EPPA0J471M0809
		470	8x12	0.08	592	7	5500	EPPA0J471M0812
		680	10x13	0.08	857	6	6300	EPPA0J681M1013
10(1A)	11.5	47	6.3x10.5	0.08	94	25	2900	EPPA1A470M6310
		68	6.3x10.5	0.08	136	25	2900	EPPA1A680M6310
		100	6.3x10.5	0.08	200	25	2900	EPPA1A101M6310
		150	6.3x10.5	0.08	300	25	2900	EPPA1A151M6310
		270	8x12	0.08	540	8	4900	EPPA1A271M0812
		470	10x13	0.08	940	7	5700	EPPA1A471M1013
		560	10x13	0.08	1120	7	5900	EPPA1A561M1013
		680	10x13	0.08	1360	7	6100	EPPA1A681M1013
16 (1C)	18.4	100	6.3x10.5	0.08	320	24	2900	EPPA1C101M6310
		180	8x12	0.08	576	9	5000	EPPA1C181M0812
		270	8x12	0.08	864	9	5100	EPPA1C271M0812
		330	10x13	0.08	1056	9	6100	EPPA1C331M1013
		470	10x13	0.08	1504	9	6100	EPPA1C471M1013
20 (1D)	23	22	6.3x6	0.12	88	50	1700	EPPA1D220M0807
		39	8x7	0.12	156	45	2000	EPPA1D390M0807
		47	8x7	0.12	188	45	2000	EPPA1D470M0807
		56	10x8	0.12	224	40	2400	EPPA1D560M1008
		68	10x8	0.12	272	40	2600	EPPA1D680M1008
		82	10x8	0.12	328	40	2600	EPPA1D820M1008
		100	8x12	0.12	400	22	3320	EPPA1D101M0812
		120	10x10	0.12	480	35	2800	EPPA1D121M1010
		150	10x13	0.12	600	20	4320	EPPA1D151M1013
25 (1E)	28.7	6.8	6.3x6	0.12	85	80	1200	EPPA1E6R8M6306
		10	6.3x6	0.12	125	65	1500	EPPA1E100M6306
		10	8x 7	0.12	125	60	1500	EPPA1E100M0807
		22	8x 7	0.12	275	50	1800	EPPA1E220M0807
		47	10x 13	0.12	588	30	3000	EPPA1E470M1013
		56	10x 13	0.12	700	28	3800	EPPA1E560M1013