

TE Series

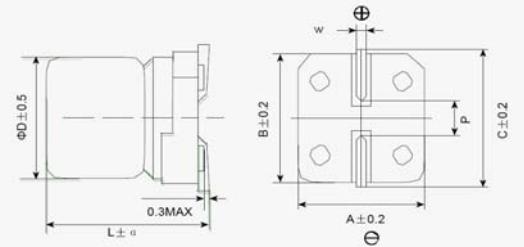
- Suitable for high density mounting
- Endurance: 105°C 2000 hours
- RoHS Compliant



● SPECIFICATIONS

Items	Characteristics													
Category Temperature Range	-40 to +105°C													
Rated Voltage Range	6.3 to 450Vdc													
Capacitance Tolerance	$\pm 20\%$ (M) (at 20°C, 120Hz)													
Leakage Current	6.3 to 100 V dc									160 to 450 V dc			(at 20°C)	
	I $\leq 0.01CV$ or 3 uA Whichever is greater (at 2 minutes)									I $\leq 0.04CV+100uA$ (at 1 minute)				
	Where, I: Max . leakage current (u A); C: Nominal capacitance (u F); V: Rated voltage (V).													
Dissipation (tan δ)	Rate voltage (Vdc)	6.3	10	16	25	35	50	63	80	100	160to250	400to450	(at 20°C, 120Hz)	
	Tan δ (Max)	0508~0608	0.30	0.24	0.20	0.16	0.14	0.12	0.12	0.12	-	0.20		
	Tan δ (Max)	0610~1821	0.40	0.30	0.26	0.16	0.14	0.12	0.12	0.12	0.15	0.20		
Low Temperature Characteristics (Max . Impedance Ratio)	Rate voltage (Vdc)	6.3	10	16	25	35	50	63	80	100	160~250	400~450	(at 120Hz)	
	Z(-25°C)/Z(+20°C)	4	3	2	2	2	2	2	2	2	6	6		
	Z(-40°C)/Z(+20°C)	10	8	6	4	3	3	3	3	3	10	18		
Endurance	The following specification shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 105°C.													
	Rate voltage (Vdc)	6.3 to 450V												
	Capacitance Change	$\leq \pm 20\%$ of the initial value												
	D.F. (tan δ)	$\leq 200\%$ of the initial specified value												
	Leakage Current	\leq the initial specified value												
Shelf Life	The following specification shall be satisfied when the capacitors are restored to 20°C after exposing them for 1000 hours (6.3 to 100 Vdc :500 hours) at 105°C, without voltage applied.													
	Rate voltage (Vdc)	6.3 to 450V												
	Capacitance Change	$\leq \pm 20\%$ of the initial value												
	D.F. (tan δ)	$\leq 200\%$ of the initial specified value												
	Leakage Current	$\leq 200\%$ of the initial specified value												

◆ DIMENSIONS (mm)



Size code	D	L	A	B	C	W	P
0508	5	7.7	5.3	5.3	5.9	0.5~0.8	1.4
0608	6.3	7.7	6.6	6.6	7.2	0.5~0.8	1.9
0610	6.3	10.5	6.6	6.6	7.2	0.5~0.8	1.9
0810	8	10.5	8.3	8.3	9.0	0.7~1.1	3.1
0812	8	12.5	8.3	8.3	9.0	0.7~1.1	3.1
0814	8	13.5	8.3	8.3	9.0	0.7~1.1	3.1
1010	10	10.5	10.3	10.3	11.0	0.7~1.1	4.5
1012	10	12.5	10.3	10.3	11.0	0.7~1.1	4.5
1014	10	13.5	10.3	10.3	11.0	0.7~1.1	4.5
1016	10	16.5	10.3	10.3	11.0	0.7~1.1	4.5
1214	12.5	13.5	13.0	13.0	13.7	1.0~1.3	4.2
1216	12.5	16.0	13.0	13.0	13.7	1.0~1.3	4.2
1221	12.5	21.0	13.0	13.0	13.7	1.0~1.3	4.2
1616	16	16.5	17.0	17.0	18.0	1.0~1.3	6.5
1621	16	21.5	17.0	17.0	18.0	1.0~1.3	6.5
1816	18	16.5	19.0	19.0	20.0	1.0~1.3	6.5
1821	18	21.5	19.0	19.0	20.0	1.0~1.3	6.5

◆ RATED RIPPLE CURRENT MULTIPLIERS

Freq. (Hz) WV(Vdc)	120	1K	10K	100K
6.3 to 450	0.50	0.80	0.90	1.00

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◆ STANDARD RATINGS

WV (Vdc)	Cap (uF)	Size code	tan δ	Ripple current (mArms/105°C, 100KHz)	WV (Vdc)	Cap (uF)	Size code	tan δ	Ripple current (mArms/105°C, 100KHz)																																																																																																								
6.3 (0J)	100	0508	0.30	105	160 (2C)	10	1010	0.15	90																																																																																																								
	220	0608	0.30	160		15	1010	0.15	136																																																																																																								
	330	0810	0.40	340		22	1014	0.15	180																																																																																																								
	1000	1010	0.40	860		33	1214	0.15	200																																																																																																								
10 (1A)	33	0508	0.24	105		47	1016	0.15	240																																																																																																								
	100	0608	0.24	175		47	1214	0.15	310																																																																																																								
	220	0608	0.24	180		68	1216	0.15	420																																																																																																								
	330	0810	0.30	340		68	1616	0.15	520																																																																																																								
	470	0810	0.30	360		100	1621	0.15	660																																																																																																								
	820	1010	0.30	860		100	1816	0.15	660																																																																																																								
16 (1C)	47	0508	0.20	105		100	1621	0.15	780																																																																																																								
	100	0608	0.20	175		1821	1010	0.15	780																																																																																																								
	150	0608	0.20	190		10	1010	0.15	120																																																																																																								
	220	0810	0.26	500		15	1010	0.15	164																																																																																																								
	330	0810	0.26	545		22	1013	0.15	200																																																																																																								
	470	1010	0.26	800		22	1216	0.15	236																																																																																																								
25 (1E)	33	0508	0.16	105		33	1016	0.15	260																																																																																																								
	47	0608	0.16	180		33	1216	0.15	300																																																																																																								
	100	0608	0.16	205		47	1221	0.15	440																																																																																																								
	220	0810	0.16	550		47	1621	0.15	556																																																																																																								
	330	1010	0.16	780		68	1621	0.15	680																																																																																																								
	470	1012	0.16	875		2.2	0610	0.15	56																																																																																																								
35 (1V)	10	0508	0.14	105	250 (2E)	3.3	0610	0.15	68																																																																																																								
	22	0508	0.14	110		4.7	0810	0.15	96																																																																																																								
	47	0608	0.14	210		4.7	1010	0.15	104																																																																																																								
	100	0810	0.14	575		10	1214	0.15	184																																																																																																								
	220	1010	0.14	835		22	1616	0.15	364																																																																																																								
	330	1012	0.14	900		33	1621	0.15	470																																																																																																								
50 (1H)	10	0508	0.12	90		33	1816	0.15	470																																																																																																								
	22	0608	0.12	175		47	1821	0.15	580																																																																																																								
	33	0608	0.12	180		1	0608	0.20	28																																																																																																								
	47	0810	0.12	540		1.5	0610	0.20	36																																																																																																								
	100	1010	0.12	700		2.2	0610	0.20	44																																																																																																								
	220	1214	0.12	900		2.2	0810	0.20	52																																																																																																								
63 (1J)	33	0810	0.12	375		3.3	0810	0.20	64																																																																																																								
	47	0810	0.12	450		3.3	1010	0.20	72																																																																																																								
	100	1010	0.12	575		3.9	0814	0.20	72																																																																																																								
	220	1214	0.12	890		3.9	1010	0.20	76																																																																																																								
	10	0508	0.12	85		4.7	0810	0.20	78																																																																																																								
	22	0608	0.12	150		4.7	0812	0.20	80																																																																																																								
80 (1K)	33	0810	0.12	375		1010	0.20	84	47	0810	0.12	450	5.6	0812	0.20	96	100	1010	0.12	575	6.8	0814	0.20	108	100	1014	0.12	600	8.2	0816	0.20	130	150	1214	0.12	800	10	1016	0.20	156	220	1216	0.12	960	10	1616	0.20	176	10	0608	0.12	140	15	1216	0.20	184	100 (2A)	22	0810	0.12	375	15	1616	0.20	210	33	0810	0.12	450	22	1621	0.20	260	47	1010	0.12	575	33	1821	0.20	280	100	1014	0.12	680	2.2	1010	0.20	50	22	0810	0.12	345	3.3	1214	0.20	80	33	1010	0.12	560	4.7	1214	0.20	96	47	1010	0.12	575	10	1616	0.20	170
	47	0810	0.12	450		5.6	0812	0.20	96																																																																																																								
	100	1010	0.12	575		6.8	0814	0.20	108																																																																																																								
	100	1014	0.12	600		8.2	0816	0.20	130																																																																																																								
	150	1214	0.12	800		10	1016	0.20	156																																																																																																								
	220	1216	0.12	960		10	1616	0.20	176																																																																																																								
	10	0608	0.12	140		15	1216	0.20	184																																																																																																								
100 (2A)	22	0810	0.12	375		15	1616	0.20	210																																																																																																								
	33	0810	0.12	450		22	1621	0.20	260																																																																																																								
	47	1010	0.12	575		33	1821	0.20	280																																																																																																								
	100	1014	0.12	680		2.2	1010	0.20	50																																																																																																								
	22	0810	0.12	345		3.3	1214	0.20	80																																																																																																								
	33	1010	0.12	560		4.7	1214	0.20	96																																																																																																								
	47	1010	0.12	575		10	1616	0.20	170																																																																																																								