

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Standard, For Audio Equipment





- Realization of a harmonious balance of sound quality, made possible by the development of new electrolyte.
- Most suited for AV equipment like DVD, MD.
- Compliant to the RoHS directive (2011/65/EU).

Values marked with an * in the dimension table are scheduled to be discontinued and are not recommended for new designs.



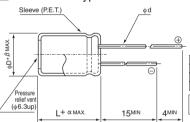




Specifications

Item	Performance Characteristics													
Category Temperature Range	−40 to +85°C													
Rated Voltage Range	6.3 to 100V													
Rated Capacitance Range	0.1 to 33000μF													
Capacitance Tolerance	±20% at 120Hz, 20°C													
Leakage Current	After 1 minute's application of rated voltage at 20° C, leakage current is not more than 0.03 CV or 4 (μ A), whichever is greater. After 2 minutes' application of rated voltage at 20° C, leakage current is not more than 0.01 CV or 3 (μ A), whichever is greater.													
	Rated voltage (V)	6.3	10	16	25	35	50	6	3 100	Measurement frequency : 120Hz at 20°0				
Tangent of loss angle (tan δ)	tan δ (MAX.)	0.28	0.24	0.20	0.16	0.14	0.12	0.	10 0.08]				
	For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF.													
0.1111	Measurement frequency: 120Hz													
	Rated voltage (V)			6.3	10	1	16 25		35	50	63	100		
Stability at Low Temperature	Impedance ratio	Z-25°C/	Z+20°C	5	4	_	3	2	2	2	2	2		
	ZT / Z20 (MAX.)	Z-40°C /	Z+20°C	12	10		8	5	4	3	3	3		
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated						Capacitance change Wit			thin ±20% of the initial capacitance value				
							tan δ			200% or less than the initial specified value				
	voltage is applied for 2000 hours at 85°C. Leakage current Less than or equal to the initial specified value													
Shelf Life	After sroring the capacitors under no load at 85°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.													
Marking	Printed with gold color letter on black sleeve.													







Type numbering system (Example: 10V 1000µF)

1 2 3 4 5 6 7 8 9 10 11 U K W 1 A 1 0 2 M P D

Capacitance tolerance Rated capacitance (1000µF) Rated voltage (10V) Series name

Configuration φD 6.3 ED 8 -10 PD 12.5 to 18 HD 20 to 25

Dimensions

• Please refer to page 20 about the end seal configuration.

Can	V	6.3		10		16		25		35		50		63		100	
Cap. (µF)	Code	0J		1A		1C		1E		1V		1H		1J		2A	
0.1	0R1				I I		i		1		1	%5×11	1.1		l	% 5×11	2.1
0.22	R22				l I		l		l		i	%5×11	2.4			※ 5 × 11	4.7
0.33	R33				l I		l I		l I		i	%5×11	3.5		l	※ 5 × 11	7.0
0.47	R47				l I		l I		l I		i	%5×11	5.0		l	% 5×11	10
1	010				l I		l I		l I		i	%5×11	10			% 5×11	21
2.2	2R2				l I				l			5×11	23			5×11	30
3.3	3R3				l I		l I					5×11	35		l	5×11	40
4.7	4R7				l I		l I		l I			5×11	40		l	5×11	45
10	100				I I		! !		i i		i	5×11	65	5×11	l 70	6.3 × 11	¦ 75
22	220				l I		l I					5×11	95	5×11	100	6.3 × 11	120
33	330				l I		l I			5×11	105	5×11	120	6.3×11	140	8 × 11.5	160
47	470				l I		 	5×11	115	5×11	120	6.3 × 11	150	6.3 × 11	165	10 × 12.5	210
100	101			5×11	145	5×11	155	6.3×11	185	6.3×11	200	8×11.5	250	10 × 12.5	300	10×20	350
220	221			6.3 × 11	230	6.3×11	250	8×11.5	320	10 × 12.5	370	10 × 12.5	410	10×16	470	12.5 × 25	600
330	331	6.3×11	265	6.3 × 11	270	8×11.5	360	10 × 12.5	420	10 × 12.5	470	10×16	570	10×20	650	12.5 × 25	¹ 750
470	471	6.3×11	310	6.3 × 11	330	8×11.5	420	10 × 12.5	530	10×16	630	12.5 × 20	760	12.5 × 20	880	16×25	1000
1000	102	8×11.5	530	10 × 12.5	630	10×16	770	10×20	950	12.5 × 20	1100	12.5 × 25	1300	16×25	1300	18×40	1370
2200	222	10×20	980	10×20	1050	12.5 × 20	1250	12.5 × 25	1550	16×25	1800	16 × 35.5	2090	18 × 35.5	2200	22×50	2400
3300	332	10×20	1170	12.5 × 20	1420	12.5 × 25	1700	16×25	1950	16 × 35.5	2220	18 × 35.5	2360	20×40	2700	25 × 50	2900
4700	472	12.5 × 20	1350	12.5 × 25	1800	16×25	2100	16×31.5	2360	18 × 35.5	2490	20×40	2900	22×50	3400		
6800	682	12.5 × 25	1600	16×25	¦ 2150	16×35.5	2500	18 × 35.5	2590	20×40	3000	22×50	3500	25 × 50	3500		1
10000	103	16×25	2000	16×35.5	2500	18 × 35.5	2640	20×40	3000	22×50	3700	25 × 50	4000				
15000	153	16×35.5	2550	18 × 35.5	2720	20×40	3400	22×50	3800	25 × 50	4300		l I				1
22000	223	18×40	3200	20×40	3700	22×50	4200	25 × 50	4500		l						
33000	333	22×50	3900	22×50	4500	25×50	4800		1							Case size $\phi D \times L \text{ (mm)}$	Rated ripple

Frequency coefficient of rated ripple current

				-	
Cap.(µF)	50Hz	120Hz	300Hz	1kHz	10kHz or more
0.1 to 47	0.75	1.00	1.35	1.57	2.00
100 to 470	0.80	1.00	1.23	1.34	1.50
1000 to 33000	0.85	1.00	1.10	1.13	1.15

Please refer to page 20, 21, 22 about the formed or taped product spec.

Rated ripple current (mArms) at 85°C 120Hz