

SY

Low impedance 、Long life Series

■ Features: Low Impedance , high permissible ripple current at high frequency and long life than SC

■ Recommended Applications :Used switching regulator applications in computers.

Especially for high frequency.

■ Corresponding product to RoHS

SY

↑
SC

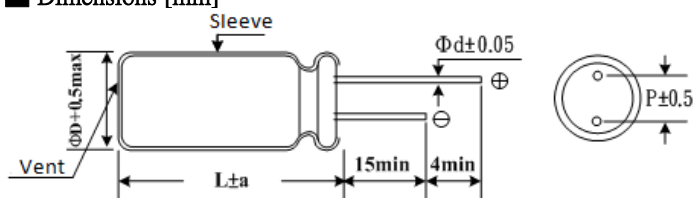
Long Life



SPECIFICATIONS

Item	Characteristics									
Category Temperature Range	-40 ~ +105℃									
Rated Voltage Range	6.3 ~ 100VDC									
Rated Capacitance Range	15 ~ 15000 μF									
Capacitance Tolerance	± 20 % (120Hz , 20℃)									
Leakage Current (20℃)	I=0.01CV or 3 μA whichever is greater. (After rated voltage applied for 2 minutes) I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V)									
Dissipation Factor(MAX) (tan δ) (120Hz ,20℃)	WV	6.3	10	16	25	35	50	63	100	
	tan δ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	
When nominal capacitance is over 1000 μF,tan δ shall be added 0.02 to the listed value with increase of every 1000 μF.										
Low Temperature Stability Impedance Ratio (MAX)	WV Z(120Hz)	6.3	10	16	25	35	50	63	100	
	Z-25℃ / Z+20℃	4	3	2	2	2	2	2	2	
	Z-40℃ / Z+20℃	8	6	4	3	3	3	3	3	
Endurance	After applying rated voltage with rated ripple current for 6000 hours at 105℃ , the capacitors shall meet the following requirements.									
	Capacitance change		Within ± 25% of initial value							
	D.F. (tan δ)		Not more than 200% of specified value							
	Leakage current		Not more than the specified value							
	DΦ		5~6.3 Φ		8~10 Φ x12.5		10x15~12 Φ		13~18 Φ	
	life(hours)		3000 hrs		4000 hrs		5000 hrs		6000 hrs	
*If dimension is down size,Endurance will be less 1000 hours than standard.										
Shelf Life	After placed at 105℃ without voltage applied for 1000 hours,the capacitors shall meet the same requirement as Endurance.									

Dimensions [mm]



ΦD	5	6.3	8	10	13	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
Φd	0.5	0.5	0.6	0.6	0.6	0.8	0.8
a	1.5	1.5	1.5	1.5	2.0	2.0	2.0

Multiplier for Ripple Current

Freq. (Hz)	120	1 K	10 K	100 K
15~ 180 μ F	0.40	0.75	0.90	1.00
220 ~ 560 μ F	0.50	0.85	0.94	1.00
680 ~1800 μ F	0.60	0.87	0.95	1.00
2200 ~ 3900 μ F	0.75	0.90	0.95	1.00
≥ 4700 μ F	0.85	0.95	0.98	1.00

■ STANDARD RATINGS

Rated Voltage (SurageVoltage) (V)	Cap (μ F)	Case size Φ DxL(mm)	Ripple current (mA/rms105℃) (100KHz)	Impedance (Ω ,20℃) (100KHz)	Rated Voltage (SurageVoltage) (V)	Cap (μ F)	Case size Φ DxL(mm)	Ripple current (mA/rms105℃) (100KHz)	Impedance (Ω ,20℃) (100KHz)		
6.3V (8)	150	5x11	210	0.580	16V(20)	120	6.3x11	340.00	0.220		
	330	6.3x11	340	0.220		220	6.3x11	469.00	0.185		
	470	6.3x11	510	0.160		330	8x11	582.00	0.150		
	680	8x11	640	0.130			8x11	640.00	0.130		
	820	10x12.5	865	0.080			470	*8x15	840.00	0.087	
	1000	8x15	840	0.087		8x20		950.00	0.078		
	1200	8x20	1050	0.069		*10x12.5		865.00	0.080		
		10x16	1210	0.060		10x16	1210.00	0.060			
	1500	8x20	1050	0.069		680	8x20	1050.00	0.069		
		*10x16	1210	0.060			10x16	1210.00	0.060		
		10x20	1400	0.046		1000	8x20	1050.00	0.069		
	1800	13x16	1450	0.049			*10x16	1210.00	0.060		
	2200	*10x20	1400	0.046			10x20	1400.00	0.046		
		10x25	1650	0.042		1200	13x16	1450.00	0.049		
		10x30	1910	0.031			10x25	1650.00	0.042		
	2700	16x16	1940	0.042			10x30	1910.00	0.031		
		10x25	1650	0.042		1500	13x20	1900.00	0.035		
	3300	13x20	1900	0.035			16x16	1940.00	0.042		
		13x25	2230	0.027			2200	13x25	2230.00	0.027	
	3900	18x16	2210	0.043		18x16		2210.00	0.043		
		4700	13x30	2650		0.024		2700	13x30	2650.00	0.024
	5600	13x35	2880	0.020		16x20	2530.00		0.027		
		16x20	2530	0.027		3300	13x35		2880.00	0.020	
		13x40	3350	0.017			13x40	3350.00	0.017		
	6800	16x25	2930	0.021			3900	16x25	2930.00	0.021	
		18x20	2860	0.026		18x20		2860.00	0.026		
		8200	16x32	3450		0.017		4700	16x32	3450.00	0.017
	10000	16x36	3610	0.015		18x25	3140.00		0.019		
		18x25	3140	0.017		5600	16x36		3610.00	0.015	
	12000	18x32	4170	0.015			18x32	4170.00	0.015		
	15000	18x36	4220	0.014			6800	16x40	4080.00	0.013	
10V (13)	100	5x11	210	0.580	8200	18x36	4220.00	0.014			
	220	6.3x11	340	0.220	10000	18x40	4280.00	0.012			
	470	8x11	640	0.130	25V (32)	47	5x11	210.00	0.580		
	680	8x15	840	0.087		100	6.3x11	340.00	0.220		
	820	10x12.5	865	0.080		150	8x11	640.00	0.160		
	1000	8x20	1050	0.069		220	8x11	640.00	0.130		
		10x16	1210	0.060		330	8x15	840.00	0.087		
	1200	10x20	1400	0.046			10x12.5	865.00	0.080		
		10x25	1650	0.042			8x20	1050.00	0.069		
	1500	13x16	1450	0.049		470	*10x12.5	1050.00	0.070		
		10x30	1910	0.031			10x16	1210.00	0.060		
		13x20	1900	0.042		680	10x20	1400.00	0.046		
	2200	16x16	1940	0.042			13x16	1450.00	0.049		
		18x16	2210	0.043		820	10x25	1650.00	0.042		
	2700	10x30	1910	0.031		1000	10x30	1910.00	0.031		
		13x25	2230	0.027			13x20	1900.00	0.035		
	3900	13x30	2650	0.024			16x16	1940.00	0.042		
		16x20	2530	0.027		1200	18x16	2210.00	0.043		
		13x35	2880	0.020			*13x20	1900.00	0.035		
	4700	13x40	3350	0.017			13x25	2230.00	0.027		
		16x25	2930	0.021		1500	13x30	2650.00	0.024		
		18x20	2860	0.026			16x20	2530.00	0.027		
	5600	16x32	3450	0.017			1800	13x35	2880.00	0.020	
		18x25	3140	0.019		18x20		2860.00	0.026		
		16x36	3610	0.015		13x40		3350.00	0.017		
	6800	18x32	4170	0.015		2200	16x25	2930.00	0.021		
		16x40	4080	0.013			16x32	3450.00	0.017		
		18x36	4220	0.014			18x25	3140.00	0.019		
	8200	18x40	4280	0.012		18x32	4170.00	0.015			
		56	5x11	210		0.580	3300	3300	18x36	4220.00	0.014
		100	6.3x11	250		0.230			5600	18x40	4280.00
	16V (20)										

" * " is down size , Ripple Life is less 1000 hrs than standard

STANDARD RATINGS

Rated Voltage (SurageVoltage) (V)	Cap (μ F)	Case size Φ DxL(mm)	Ripple current (mA/rms105°C) (100KHz)	Impedance (Ω ,20°C) (100KHz)	Rated Voltage (SurageVoltage) (V)	Cap (μ F)	Case size Φ DxL(mm)	Ripple current (mA/rms105°C) (100KHz)	Impedance (Ω ,20°C) (100KHz)
35V (44)	33	5x11	210	0.580	50V (63)	1200	18x25	2740	0.026
	47	6.3x11	275	0.390		1500	16x36	3150	0.019
	56	6.3x11	340	0.220		1800	16x40	3710	0.016
	68	6.3x11	500	0.170			18x32	3635	0.021
	82	6.3x11	540	0.160		2200	18x36	3680	0.017
	100	8x11	580	0.150		2700	18x40	3800	0.014
	150	8x11	640	0.130	63V (79)	15	5x11	55	2.3
	220	*8x15	840	0.087		33	6.3x11	115	1.2
		10x12.5	865	0.080		56	8x12	232	0.63
	270	8x20	1050	0.069		82	8x15	300	0.45
	330	*10x16	1210	0.060			10x12.5	288	0.43
		10x20	1400	0.046		120	8x20	362	0.33
	470	10x20	1400	0.046			10x16	357	0.31
		13x16	1450	0.049		180	10x20	466	0.21
	560	10x25	1650	0.042			13x16	466	0.23
	680	10x30	1910	0.031		220	10x25	531	0.2
		13x20	1900	0.035		270	10x30	663	0.15
		16x16	1940	0.042			13x20	690	0.16
	820	13x20	1900	0.035			16x16	795	0.14
	1000	13x25	2230	0.027		330	13x25	784	0.12
		18x16	2210	0.043		390	18x16	920	0.12
	1200	13x30	2650	0.024		470	13x30	905	0.1
		16x20	2530	0.027			16x20	1040	0.091
	1500	13x35	2880	0.020		560	13x35	1050	0.083
	1800	13x40	3350	0.017			16x25	1250	0.073
		16x25	2930	0.021		680	13x40	1180	0.071
		18x20	2860	0.026			18x20	1240	0.08
	2200	16x32	3450	0.017		820	16x32	1570	0.054
		18x25	3140	0.019			18x25	1490	0.057
	2700	16x36	3610	0.015		1000	16x36	1790	0.045
		18x32	4170	0.015			18x32	1630	0.047
	3300	16x40	4080	0.013		1200	16x40	2020	0.04
		18x36	4220	0.014	100V (125)	15	6.3x11	115	1.2
	3900	18x40	4280	0.012		27	8x12	232	0.63
50V (63)	22	5x11	180	0.700		39	8x15	300	0.45
	33	6.3x11	245	0.490		47	10x12.5	288	0.43
	47	6.3x11	300	0.520		56	8x20	362	0.33
	56	6.3x11	295	0.300		68	10x16	357	0.31
	100	8x11	555	0.170		82	10x20	466	0.21
	120	8x15	730	0.120			13x16	466	0.23
	150	10x12.5	760	0.120		100	10x25	531	0.2
	180	8x20	910	0.091		120	10x30	663	0.15
	220	10x16	1050	0.084			13x20	690	0.16
	270	10x20	1220	0.060		150	16x16	795	0.14
		13x16	1260	0.061		180	13x25	784	0.12
	330	*10x20	1400	0.058			18x16	920	0.12
		10x25	1440	0.055		220	13x30	905	0.1
		10x30	1690	0.043			16x20	1040	0.091
	470	13x20	1660	0.045		270	13x35	1050	0.083
		16x16	1690	0.055			16x25	1250	0.073
	560	13x25	1950	0.034		330	13x40	1180	0.071
		18x16	1930	0.054			18x20	1240	0.08
	680	13x30	2310	0.030		390	16x32	1570	0.054
	820	13x35	2510	0.025			18x25	1490	0.057
		16x20	2210	0.034		470	16x36	1790	0.045
	1000	13x40	2920	0.021			18x32	1630	0.047
		16x25	2555	0.025		560	16x40	2020	0.04
		18x20	2490	0.036		680	18x36	1790	0.04
	1200	16x32	3010	0.022		820	18x40	2330	0.036

" * " is down size , Ripple Life is less 1000 hrs than standard