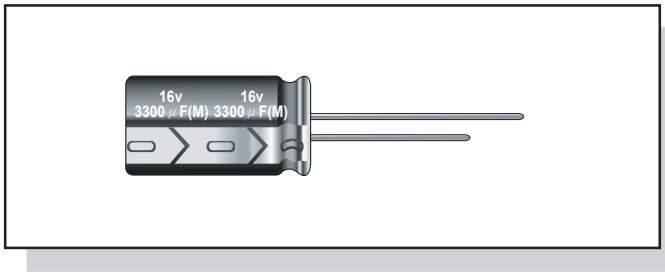
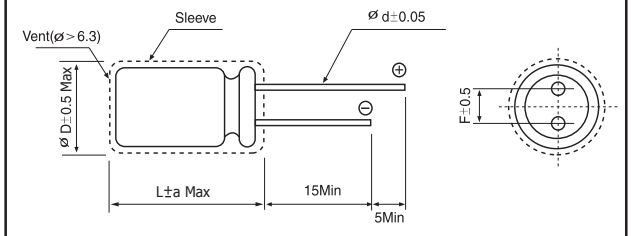


- **Load Life of 2,000~3,000 Hours at 105°C**
- **Low ESR**
- **Suitable for Computer Motherboards that Require Very Low ESR at High Frequency**

■ SPECIFICATIONS

Operating Temperature Range	-40~+105°C
Rated Voltage Range	6.3 ~ 50V
Capacitance Range	0.47 ~ 15000uF
Capacitance Tolerance	±20% (at 20°C, 120Hz)
Leakage Current	I≤0.01 CV or 3 uA whichever is greater (at 20°C, after 2 minutes) I: Leakage Current (uA) C: Nominal Capacitance (uF) V: Rated Voltage (V)
Dissipation Factor (At 20°C, 120Hz)	Rated Voltage(V): 6.3 / 10 / 16 / 25 / 35 / 50 tan δ: 0.22 / 0.19 / 0.16 / 0.14 / 0.12 / 0.10 When nominal capacitance is over 1000uF, tan δ shall be added 0.02 to the listed value with every increase of 1000uF
Temperature Characteristics (Impedance Ratio at 120Hz)	W.V: 6.3 / 10 / 16 / 25 / 35 / 50 Z(-25°C)/Z(+20°C): 6 / 4 / 3 / 3 / 2 / 2 Z(-40°C)/Z(+20°C): 10 / 8 / 6 / 4 / 3 / 3
Load Life (+105°C)	Time: 3,000 hours after an application of DC bias voltage plus the rated ripple current. The peak voltage shall not exceed rated DC voltage Capacitance Change: Within ±20% of the initial value Dissipation Factor: 200% of the initial specified value or less Leakage Current: The specified value or less Diam. Ø≦8: 2000Hrs Diam. Ø≧10: 3000Hrs
Shelf Life (+105°C)	After leaving the capacitor under on load at 105°C for 1000 hours, they meet the specified value for load life characteristics listed above.

■ DIMENSION



ØD	5	6.3	8	10	12.5	16	18
F	2.0	2.5	3.5	5.0		7.5	
Ød	0.5 L = 20:0.6			0.6 L > 30:0.8		0.8	
a	1.5						

■ MULTIPLIER FOR RIPPLE CURRENT

Frequency Coefficient

Cap (uF) \ Freq(Hz)	120	1K	10K	100K
0.47 ~ 180	0.40	0.75	0.90	1.0
220 ~ 560	0.50	0.85	0.94	1.0
680 ~ 1800	0.60	0.87	0.95	1.0
2200 ~ 3900	0.75	0.90	0.95	1.0
4700 ~ 15000	0.85	0.95	0.98	1.0

■ STANDARD RATINGS

V / ØDxL (mm)	6.3			
	Cap	Impedance (Ω) 100KHz		Ripple
	uF	20°C	-10°C	mArms
5x11	150	0.60	1.20	180
6.3x11	330	0.23	0.46	290
8x12	470	0.13	0.26	555
8x12	680	0.13	0.26	555
8x12	820	0.13	0.26	555
8x12	1000	0.13	0.26	555
8x16	1500	0.11	0.22	730
8x20	1200	0.074	0.148	995
8x20	1500	0.074	0.148	995
10x13	820	0.095	0.190	755
10x16	1000	0.068	0.136	1050
10x16	1200	0.068	0.136	1050
10x16	1500	0.068	0.136	1050
10x20	1500	0.041	0.082	1220
10x20	2200	0.041	0.082	1220
10x25	2700	0.040	0.080	1440
12.5x20	3300	0.038	0.076	1655
12.5x25	3900	0.032	0.064	1945
12.5x30	4700	0.029	0.058	2310
16x20	5600	0.029	0.058	2205
16x25	6800	0.022	0.044	2555
16x32	8200	0.018	0.036	3010
16x32	10000	0.018	0.036	3010
18x32	12000	0.016	0.032	3635
18x36	15000	0.015	0.030	3680

V / ØDxL (mm)	10			
	Cap	Impedance (Ω) 100KHz		Ripple
	uF	20°C	-10°C	mArms
5x11	100	0.60	1.20	180
6.3x11	220	0.23	0.46	290
8x12	470	0.13	0.26	555
8x12	680	0.13	0.26	555
8x16	680	0.11	0.22	730
8x16	1000	0.11	0.22	730
8x20	1000	0.074	0.148	995
10x13	680	0.095	0.190	755
10x16	1000	0.068	0.136	1050
10x16	1200	0.068	0.136	1050
10x20	1000	0.041	0.082	1220
10x20	1500	0.041	0.082	1220
10x25	2200	0.040	0.080	1440
10x30	2200	0.038	0.076	1815
12.5x20	2200	0.038	0.076	1655
12.5x25	3300	0.032	0.064	1945
12.5x30	3900	0.029	0.058	2310
12.5x35	4700	0.027	0.054	2400
16x25	4700	0.022	0.044	2555
16x25	5600	0.022	0.044	2555
16x32	6800	0.018	0.036	3010
16x36	8200	0.016	0.032	3150
18x36	10000	0.015	0.030	3680
18x40	15000	0.014	0.028	3800

V / ØDxL (mm)	16			
	Cap	Impedance (Ω) 100KHz		Ripple
	uF	20°C	-10°C	mArms
5x11	56	0.60	1.20	180
6.3x11	120	0.23	0.46	290
8x12	330	0.13	0.26	555
8x12	470	0.13	0.26	555
8x16	470	0.11	0.22	730
8x20	680	0.074	0.148	995
10x13	220	0.095	0.190	755
10x13	330	0.095	0.190	755
10x13	470	0.095	0.190	755
8x20	470	0.074	0.148	995
10x16	680	0.068	0.136	1050
10x16	1000	0.068	0.136	1050
10x20	1500	0.041	0.082	1220
12.5x25	2200	0.032	0.064	1945
12.5x30	2700	0.029	0.058	2310
16x25	3300	0.022	0.044	2555
16x25	3900	0.022	0.044	2555
16x32	4700	0.018	0.036	3010
16x36	5600	0.016	0.032	3150
18x36	6800	0.015	0.030	3680
18x36	8200	0.015	0.030	3680
18x40	10000	0.014	0.028	3800

V / ØDxL (mm)	25			
	Cap	Impedance (Ω) 100KHz		Ripple
	uF	20°C	-10°C	mArms
5x11	47	0.60	1.20	180
6.3x11	100	0.23	0.46	290
8x12	220	0.13	0.26	555
8x16	330	0.11	0.22	730
8x20	470	0.074	0.148	995
8x20	330	0.074	0.148	995
10x13	470	0.095	0.190	755
10x13	330	0.095	0.190	755
10x16	330	0.068	0.136	1050
10x16	470	0.068	0.136	1050
10x20	680	0.041	0.082	1220
10x20	820	0.041	0.082	1220
10x30	1000	0.038	0.076	1815
12.5x20	1000	0.038	0.076	1655
12.5x25	1500	0.032	0.064	1945
16X25	2200	0.022	0.044	2555
16x25	2700	0.022	0.044	2555
16x32	3300	0.018	0.036	3010
16x36	3900	0.016	0.032	3150
18x36	4700	0.015	0.030	3680
18x40	6800	0.014	0.028	3800

Ripple Current: mA(rms) at 100KHz, 105°C

V / ØDxL (mm)	35			
	Cap	Impedance (Ω) 100KHz		Ripple
	uF	20°C	-10°C	mArms
5x11	33	0.60	1.20	180
6.3x11	56	0.23	0.46	290
8x12	100	0.13	0.26	555
8x16	220	0.11	0.22	730
8x20	270	0.074	0.148	995
10x16	220	0.068	0.136	1050
10x16	330	0.068	0.136	1050
10x20	470	0.041	0.082	1220
10x25	560	0.040	0.080	1440
10X30	680	0.038	0.076	1815
12.5x20	680	0.038	0.076	1655
12.5x25	1000	0.032	0.064	1945
12.5x30	1200	0.029	0.058	2310
16x25	1500	0.022	0.044	2555
16x25	1800	0.022	0.044	2555
16x32	2200	0.018	0.036	3010
16x36	2700	0.016	0.032	3150
18x36	3300	0.015	0.030	3680
18x40	4700	0.014	0.028	3800

V / ØDxL (mm)	50			
	Cap	Impedance (Ω) 100KHz		Ripple
	uF	20°C	-10°C	mArms
5x11	0.47	5.00	10.0	25
5x11	1	3.50	7.00	40
5x11	2.2	3.00	6.00	55
5x11	3.3	2.60	5.20	65
5x11	4.7	2.30	4.60	90
5x11	10	1.40	2.80	120
5x11	22	1.20	2.40	170
6.3x11	47	0.43	0.86	300
8x12	100	0.24	0.48	485
8x16	120	0.18	0.36	635
10x13	150	0.16	0.32	615
10x16	220	0.13	0.26	850
10x20	330	0.090	0.18	1030
12.5x20	470	0.060	0.12	1500
12.5x25	560	0.050	0.10	1832
16x20	680	0.048	0.096	1835
16x25	1000	0.034	0.068	2235
16x32	1200	0.028	0.056	2700
16x36	1500	0.025	0.050	2790
18x32	1800	0.025	0.050	3000
18x36	2200	0.023	0.046	3100

Ripple Current: mA(rms) at 100KHz, 105°C