

LS Series Snap-in Type 85°C Miniaturized

Features

- ◆ Directly mountable on printed circuit board, without holders.
- ◆ Aluminum case designed explosion-proof vent.
- ◆ RoHS Compliant



Specifications

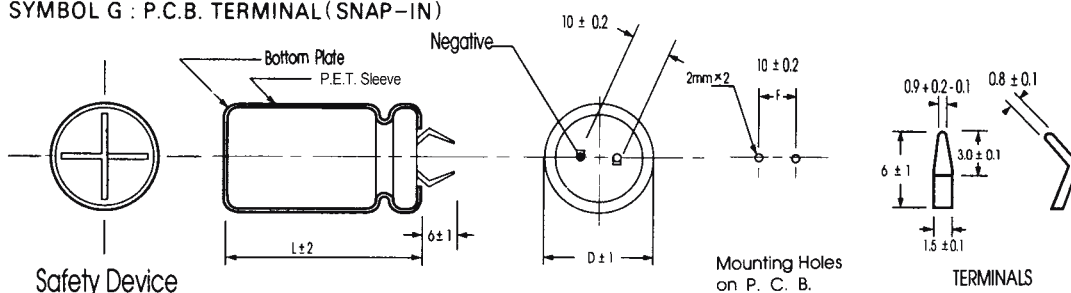
Item	Performance Characteristics									
Operating Temperature Range	-25 to +85°C									
Rated Voltage Range	160 to 450 VDC									
Capacitance Range	47 to 2700 µF									
Capacitance Tolerance	±20% (120Hz, +20°C)									
Leakage Current (+20°C, max.)	I ≤ 0.02CV After 5 minutes with rated working voltage applied.									
Dissipation Factor (tan δ, at 20°C, 120Hz)	Less than the value under table (%)									
	<table border="1"> <thead> <tr> <th>µF \ VDC</th> <th>160~250</th> <th>315~450</th> </tr> </thead> <tbody> <tr> <td>47~390</td> <td>15</td> <td>20</td> </tr> <tr> <td>470~2700</td> <td>15</td> <td>20</td> </tr> </tbody> </table>	µF \ VDC	160~250	315~450	47~390	15	20	470~2700	15	20
	µF \ VDC	160~250	315~450							
47~390	15	20								
470~2700	15	20								
Low Temperature Characteristics (at 120Hz)	Impedance ratio max									
	<table border="1"> <thead> <tr> <th>Working voltage (VDC)</th> <th>160</th> <th>200~250</th> <th>400~450</th> </tr> </thead> <tbody> <tr> <td>Z -25°C / Z +20°C</td> <td>4</td> <td>4</td> <td>8</td> </tr> </tbody> </table>	Working voltage (VDC)	160	200~250	400~450	Z -25°C / Z +20°C	4	4	8	
Working voltage (VDC)	160	200~250	400~450							
Z -25°C / Z +20°C	4	4	8							
Endurance	Test conditions Duration time :2000 Hrs Ambient temperature :+85°C Applied voltage :Rated DC working voltage After test requirement at +20°C Capacitance change :≤ ±20% of the initial measured value Dissipation factor :≤ 200% of the initial specified value Leakage current :≤ The initial specified value									
Shelf Life	Test conditions Duration time :1000 Hrs Ambient temperature :+85°C Applied voltage :None After test requirement at +20°C : Same limits as Endurance. Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.									

Multiplier for Ripple Current vs. Frequency

CAP(µF) \ Frequency(Hz)	50(60)	120	1K	10K	50K-100K
10 < CAP ≤ 100	0.8	1	1.36	1.48	1.53
100 < CAP ≤ 1000	0.8	1	1.25	1.35	1.38
1000 < CAP	0.8	1	1.17	1.25	1.28

Diagram of Dimensions:(unit:mm)

SYMBOL G : P.C.B. TERMINAL (SNAP-IN)



Case Size

φ D x L (mm)

Cap (μF)	φ D	WV		160								200							
		22		25		30		35		22		25		30		35			
		Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple		
150										22X21	0.96								
180		22X21	1.12							22X21	1.00								
220		22X21	1.35							22X21	1.36								
270		22X21	1.40							22X26	1.50								
330		22X26	1.44							22X26	1.70	25X26	1.70						
390		22X26	1.66	25X21	1.66					22X26	1.80	25X26	1.80						
470		22X31	1.76	25X26	1.76	30X21	1.76			22X31	2.23	25X26	2.23	30X21	2.23				
560		22X31	2.03	25X26	2.03	30X26	2.03	35X27	3.13	22X36	2.40	25X31	2.40	30X26	2.40				
						30X21	1.87												
680		22X36	2.36	25X31	2.36	30X26	2.36	35X32	3.44	22X41	2.55	25X36	2.55	30x26	2.55	35x32	3.52		
								35X27	3.20							35X27	3.29		
820		22X41	2.27	25X36	2.27	30X31	2.27	35X32	3.96			25X36	3.00	30x31	3.00	35x32	3.80		
						30X26	2.10	35X27	2.10	22X46	2.80					35x27	3.50		
1000				25X41	3.13	30X31	3.13	35X32	4.47			25X46	3.52	30x36	3.52	35x37	4.40		
		22X51	2.50	25X36	2.95			35X27								35x32	4.10		
1200				25X46	3.44	30X36	3.44	35X37	4.65					30x41	3.80	35x42	5.00		
								35x32	4.10							35x37	4.70		
1500						30X41	3.96	35X42	4.76					30x46	4.40	35x47	5.40		
								35x37	4.30							35x42	5.10		
1800						30X46	4.47	35x47	4.60					30X56	5.15	35X52	5.15		
2200						30X56	4.60	35X52	4.60							35X57	5.21		

Cap (μF)	φ D	WV		220								250							
		22		25		30		35		22		25		30		35			
		Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple		
120										22X21	0.85								
150		22X21	0.71							22X21	0.95								
180		22X21	0.90							22X26	1.12	25X21	1.12						
220		22X26	1.04							22X26	1.25	25X21	1.20						
270		22X26	1.23	25X26	1.32					22X26	1.5	25X26	1.25						
330		22X31	1.47	25X26	1.47					22X31	1.7	25X26	1.50	30X21	1.70				
				25X21	1.35														
390		22X36	1.56	25X31	1.58					22X36	1.92	25X31	1.70	30X26	1.92				
		22X31	1.46	25X26	1.46														
470		22X36	1.75	25X31	1.75	30X26	1.75			22X41	2.2	25X31	1.92	30X26	2.20				
560		22X41	2.09	25X36	2.09	30X31	2.09	35X27	2.09			25X36	2.20	30X31	2.52	35X27	2.52		
				25X31	1.92	30X26	1.92												
680		22X46	2.18	25X41	2.18	30X31	2.18	35X27	2.18			25X41	2.52	30X36	2.80	35X27	2.80		
				25X36	2.05														
820				25X46	2.34	30X36	2.34	35X32	2.34			25X46	2.80	30X41	3.15	35X32	3.15		
		22X51	2.21	25X41	2.21														
1000				25X51	3.04	30X41	3.04	35X32	3.04					30X46	3.60	35X37	3.60		
						30X51	3.51	35X37	3.51					30X56	3.9	35X42	3.90		
1200				25X56	3.30	30X46	3.30												
1500						30X56	3.65	35X42	3.65							35X47	4.50		
1800								35X52	3.80							35X63	4.60		
2200								35X57	3.99							35X70	4.72		

Ripple Current (A, rms) at 85°C 120Hz

φ D x L (mm)

Cap (μF)	φ D	WV															
		350								400							
		22		25		30		35		22		25		30		35	
		Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
47										22x21	0.42						
68										22x21	0.51						
82										22x26	0.83						
100		22x26	0.76							22x26	0.95	25x21	0.95				
120		22x26	0.89	25x26	0.89					22x26	1.07	25x21	1.07				
150		22x31	0.99	25x26	0.99	30x21	0.99			22x31	1.26	25x26	1.26	30x21	1.26		
180		22x36	1.15	25x31	1.15	30x26	1.15			22x36	1.46	25x31	1.46	30x26	1.46		
220		22x41	1.40	25x36	1.40	30x26	1.40	35x22	1.40	22x41	1.75	25x36	1.75	30x31	1.75		
												25x31	1.62	30x26	1.62		
270				25x41	1.63	30x31	1.63	35x27	1.63			25x41	1.85	30x31	1.85	35x27	1.85
										22x46	1.73	25x36	1.73				
330				25x46	1.88	30x36	1.88	35x27	1.88			25x46	2.10	30x36	2.10	35x32	2.10
										22x51	1.98	25x41	1.98	30x31	1.98	35x27	1.98
390						30x36	2.12	35x32	2.12					30x41	2.35	35x37	2.35
										22x56	2.20	25x51	2.20	30x36	2.20	35x32	2.20
470						30x41	2.41	35x37	2.41							35x42	2.60
												25x56	2.45	30x41	2.45	35x37	2.45
560								35x42	2.80							35x47	2.95
														30x46	2.90	35x42	2.90
680								35x47	3.20							35x47	3.15
														30x56	3.05		

Cap (μF)	φ D	WV																		
		420								450										
		22		25		30		35		22		25		30		35		40		
		Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	
47		22x21	0.38							22x21	0.36									
68		22x26	0.49							22x26	0.60									
82		22x31	0.85	25x26	0.85					22x26	0.89	25x21	0.89							
		22x26	0.79	25x21	0.79															
100		22x36	1.03	25x26	1.03					22x31	1.03	25x26	1.03							
		22x31	0.96																	
120		22x36	1.12	25x31	1.12					22x36	1.10	25x31	1.10							
		22x31	1.04	25x26	1.04															
150		22x41	1.32	25x36	1.32	30x31	1.32			22x41	1.30	25x36	1.30	30x26	1.30					
		22x36	1.34	25x31	1.34	30x26	1.34			22x36	1.13	25x31	1.13	30x21	1.13					
180				25x41	1.48	30x31	1.48			22x46	1.45	25x41	1.45	30x31	1.45					
		22x36	1.4	25x36	1.40	30x26	1.40			22x41	1.36	25x36	1.36	30x26	1.36					
220				25x46	1.75	30x36	1.75	35x32	1.75	22x51	1.65	25x46	1.65	30x36	1.65	35x27	1.65			
		22x41	1.65	25x41	1.65	30x31	1.65	35x27	1.65			25x41	1.55	30x31	1.55					
270				25x51	1.98	30x41	1.98	35x37	1.98			25x51	1.90	30x41	1.90	35x32	1.90			
		22x46	1.88	25x46	1.88	30x36	1.88	35x32	1.88			25x46	1.80	30x36	1.80					
330				25x51	2.15	30x41	2.15	35x42	2.27			25x56	2.20	30x41	2.20	35x37	2.20			
								35x47	2.52							35x32	2.10			
390				25x56	2.40	30x46	2.40	35x42	2.40							35x42	2.40	40x32	2.40	
						30x51	2.50	35x47	2.50							35x37	2.30			
470						30x51	2.50	35x47	2.50							35x47	2.75	40x37	2.75	
																35x42	2.60			
560						30x56	2.98	35x52	2.98							35x52	2.90	40x42	2.90	
																35x47	2.78			
680								35x57	3.20							35x57	3.0	40x47	3.0	
	820															35x63	3.2	40x57	3.2	

Ripple Current (A, rms) at 85°C 120Hz