

CapXon HS Series

HS Series Snap-in Type 105°C Miniaturized

Features

- ◆ Highly reliable capacitors that withstand ripple current.
- ◆ Terminal spacing fixed at 10 mm for printed circuit board plug in.
- ◆ Aluminum case designed explosion-proof vent.
- ◆ Best for switching power supplies.
- ◆ For detail specifications, please refer to Engineering Bulletin No. E139
- ◆ RoHS Compliant



Specifications

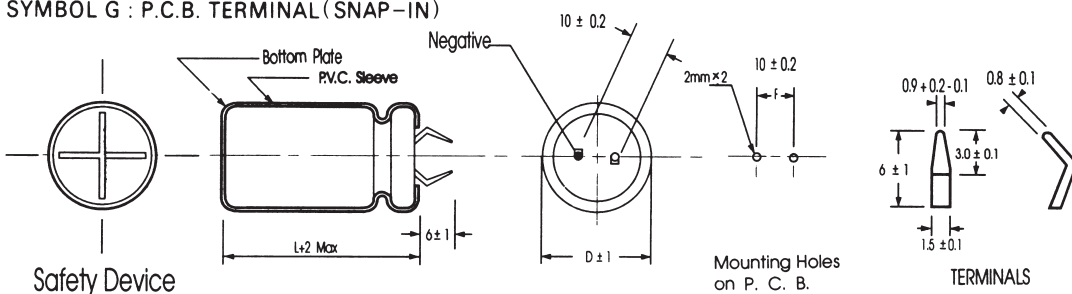
Item	Performance Characteristics																									
Operating Temperature Range	-25 to +105°C																									
Rated Voltage Range	160 to 450 V · DC																									
Capacitance Range	33 to 2700 µF																									
Capacitance Tolerance	±20% (120Hz, +20°C)																									
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 \ WVDC</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 \ WVDC	160~250	315~450	47~390	15	20	470~2700	15	20																
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470~2700	15	20																								
Low Temperature Characteristics (at 120Hz)	Impedance ratio Max																									
	<table border="1"> <thead> <tr> <th>Working voltage (VDC)</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> <th>160</th> <th>200</th> <th>250</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>Z -25°C / Z +20°C</td> <td>5</td> <td>5</td> <td>4</td> <td>4</td> <td>4</td> <td>4</td> <td>4</td> <td>4</td> <td>4</td> <td>4</td> <td>8</td> <td>8</td> </tr> </tbody> </table>	Working voltage (VDC)	10	16	25	35	50	63	100	160	200	250	400	450	Z -25°C / Z +20°C	5	5	4	4	4	4	4	4	4	4	8
Working voltage (VDC)	10	16	25	35	50	63	100	160	200	250	400	450														
Z -25°C / Z +20°C	5	5	4	4	4	4	4	4	4	4	8	8														
Load Life	Test conditions																									
	Duration time :2000 Hrs Ambient temperature :+105°C Applied voltage :Rated DC working voltage After test requirements 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 :+105°C Applied voltage :None After test requirements at +20°C : Same limits as Load life. 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	400	1K	10K	50K-100K
10 < CAP ≤ 100	0.8	1	1.23	1.36	1.48	1.53
100 < CAP ≤ 1000	0.8	1	1.16	1.25	1.35	1.38
1000 < CAP	0.8	1	1.11	1.17	1.25	1.28

Diagram of Dimensions:(unit:mm)

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



CapXon HS Series

Case Size

φ DxL(mm)

Cap (μF)	WV(SV) ψ D	160 (200)								200 (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
100										22x21	0.38						
150		22x21	0.37							22x21	0.54	25x21	0.54				
220		22x21	0.65							22x26	0.92	25x21	0.92	30x21	0.92		
270		22x21	0.74							22x26	1.03	25x21	1.03	30x21	1.03		
330		22x26	0.98	25x21	0.98	30x21	0.98			22x31	1.21	25x26	1.21	30x21	1.21		
390		22x26	1.10	25x26	1.10	30x21	1.10			22x31	1.39	25x26	1.39	30x26	1.39		
470		22x31	1.21	25x26	1.21	30x21	1.21			22x36	1.45	25x31	1.45	30x26	1.45	35x22	1.45
560		22x36	1.40	25x31	1.40	30x26	1.40			22x36	1.60	25x36	1.60	30x26	1.60	35x22	1.60
680		22x41	1.64	25x31	1.64	30x26	1.64	35x27	1.64	22x41	1.80	25x36	1.80	30x31	1.80	35x27	1.80
820				25x36	1.85	30x31	1.85	35x27	1.85			25x41	2.00	30x31	2.00	35x32	2.00
1000				25x46	2.15	30x31	2.15	35x27	2.15					30x36	2.30	35x32	2.30
1200				25x51	2.46	30x41	2.46	35x32	2.46					30x41	2.70	35x37	2.70
1500						30x46	2.50	35x37	2.50							35x42	3.10
1800						30x51	3.13	35x42	3.13							35x47	3.75
2200								35x46	3.39								
2700								35x52	3.90								

Cap (μF)	WV(SV) ψ D	220 (270)								250 (300)							
		22		25		30		35		22		25		30		35	
		Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
68										22x21	0.27						
82										22x21	0.34						
100										22x21	0.44	25x21	0.44				
120										22x26	0.48	25x21	0.48				
150		22x21	0.57							22x26	0.60	25x21	0.60	30x21	0.60		
180		22x26	0.61	25x26	0.61					22x26	0.69	25x26	0.69	30x21	0.69		
220		22x26	0.81	25x26	0.81					22x31	1.00	25x26	1.00	30x21	1.00		
270		22x31	1.01	25x26	1.01	30x26	1.01			22x36	1.16	25x31	1.16	30x26	1.16		
330		22x31	1.09	25x26	1.09	30x26	1.09			22x41	1.28	25x31	1.28	30x26	1.28		
390		22x36	1.18	25x31	1.18	30x26	1.18			22x41	1.48	25x31	1.48	30x31	1.48		
470		22x41	1.28	25x36	1.28	30x26	1.28			22x46	1.65	25x36	1.65	30x31	1.65	35x27	1.65
560		22x46	1.52	25x41	1.52	30x31	1.52	35x27	1.52			25x46	1.85	30x36	1.85	35x27	1.85
680		22x51	1.66	25x46	1.66	30x36	1.66	35x27	1.66					30x41	2.00	35x32	2.00
820				25x51	1.90	30x41	1.90	35x32	1.90					30x46	2.30	35x37	2.30
1000						30x46	2.28	35x37	2.28							35x42	2.60
1200						30x51	2.32	35x42	2.32							25x47	2.85
1500								35x47	2.35								
1800								35x52	2.40								

Cap (μF)	WV(SV) ψ D	350 (400)								400 (450)							
		22		25		30		35		22		25		30		35	
		Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
33										22x21	0.39						
47										22x21	0.56	25x21	0.56				
56										22x21	0.60	25x21	0.60				
68		22x21	0.45							22x26	0.65	25x21	0.65				
82		22x26	0.53							22x26	0.75	25x26	0.75				
100		22x26	0.65							22x31	0.78	25x26	0.78	30x21	0.78		
120		22x31	0.74	25x36	0.74					22x31	0.85	25x26	0.85	30x21	0.85		
150		22x36	0.80	25x31	0.80					22x36	0.98	25x31	0.98	30x26	0.98		
180		22x41	0.95	25x31	0.95	30x26	0.95			22x41	1.14	25x36	1.14	30x31	1.14	35x27	1.14
220		22x46	1.10	25x36	1.10	30x31	1.10					25x41	1.21	30x36	1.21	35x27	1.21
270				25x41	1.20	30x31	1.20	35x26	1.20					30x41	1.40	35x32	1.40
330				25x46	1.30	30x36	1.30	35x32	1.30					30x46	1.57	35x37	1.57
390						30x41	1.45	35x37	1.45							35x37	1.74
470						30x46	1.70	35x36	1.70							35x42	1.98
560								35x42	1.85							35x47	2.23
680								35x47	1.98								

Ripple Current (A, rms) at 105°C 120Hz

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φ D×L(mm)

Cap (μF)	WV(SV)		420 (470)						450 (500)									
	ψ D	Size	22		25		30		35		22		25		30		35	
			Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
33		22x21	0.34								22x21	0.24						
47		22x21	0.45	25x21	0.45						22x26	0.35	25x21	0.35				
56		22x21	0.5	25x21	0.5	30x21	0.5				22x26	0.41	25x21	0.41				
68		22x26	0.58	25x21	0.58	30x21	0.58				22x31	0.55	25x26	0.55	30x21	0.55		
82		22x26	0.68	25x26	0.68	30x21	0.68				22x31	0.64	25x26	0.64	30x21	0.64		
100		22x31	0.75	25x31	0.75	30x26	0.75				22x36	0.74	25x26	0.74	30x26	0.74		
120		22x36	0.83	25x31	0.83	30x26	0.83				22x41	0.82	25x31	0.82	30x26	0.82		
150		22x41	0.97	25x36	0.97	30x26	0.97				22x46	0.96	25x36	0.96	30x31	0.96		
180				25x41	1.08	30x31	1.08						25x41	1.15	30x31	1.05	35x27	1.05
220						30x36	1.18	35x27	1.18						30x36	1.15	35x32	1.15
270						30x41	1.42	35x32	1.42						30x46	1.48	35x37	1.48
330						30x46	1.56	35x37	1.56								35x42	1.55
390								35x42	1.76								35x47	1.75
470								35x47	1.78								35x52	1.85
560								35x52	1.8									

Ripple Current (A, rms) at 105°C 120Hz