



CD13 Series

Standard product

For industrial equipment control etc.



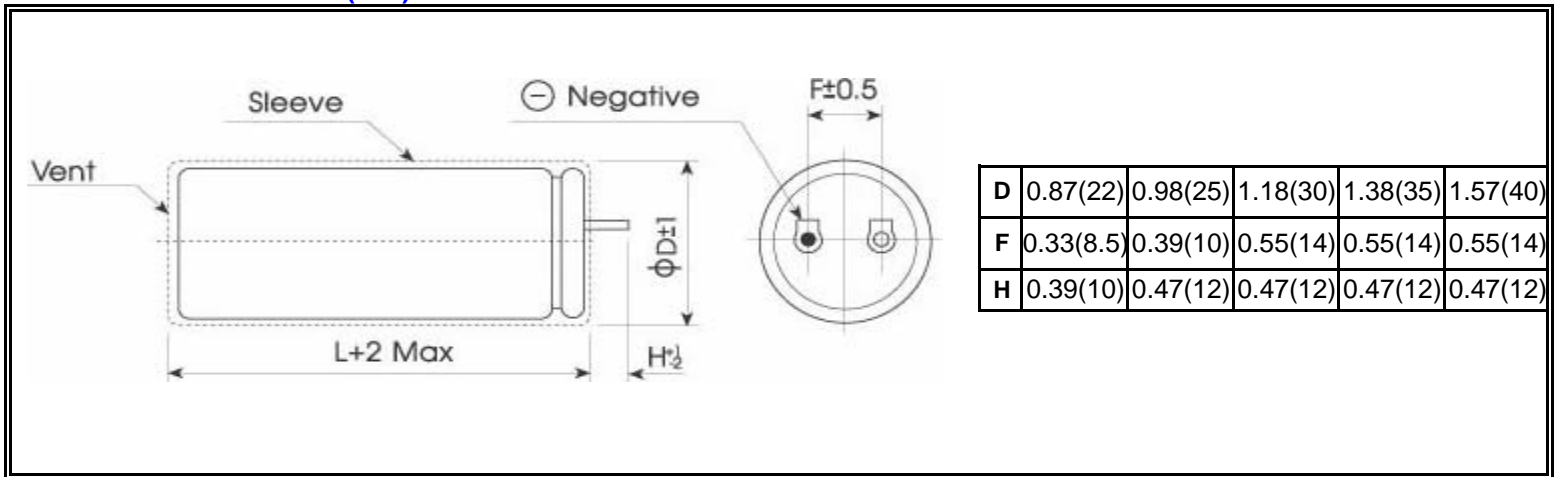
SPECIFICATIONS

Item	Characteristics							
Rated Voltage Range(V)	16V - 450V							
Operating Temperature Range(°C)	-40°C - +85°C(16-100V), -25°C - +85°C(160-450V)							
Capacitance Range (µF)	33-68000							
Leakage Current	MAX 3C (at 20°C, after 5 minutes) C: Nominal Capacitance(µF) V: Rated Voltage(V)							
Dissipation Factor (20°C,120Hz)	Rated Voltage (V)	16-25			35-63		80-350	400-450
	Cap (µF)	3300-10000	15000-33000	47000-68000	1000-10000	15000-33000	47-10000	33-470
	Tan δ	0.35	0.50	0.75	0.25	0.35	0.20	0.25
Temperature Stability (120Hz)	Rated Voltage (V)				16 - 100	160 - 250	315 - 450	
	Impedance Ratio	Z-25°C/Z+20°C			3	3	8	
		Z-40°C/Z+20°C			12			
Load Life(+105°C)	Time		1000 hours					
	Leakage Current		Not more than the specified value					
	Capacitance Change		Within +/-20% of the initial value					
	Dissipation Factor		Not more than 200% of the specified value					
Shelf Life(+105°C)	Time		1000 hours					
	Leakage Current		Not more than the specified value					
	Capacitance Change		Within +/-20% of the initial value					
	Dissipation Factor		Not more than 200% of the specified value					

MULTIPLIER FOR RIPPLE CURRENT

Frequency Coefficient							Temperature Coefficient				
Frequency (Hz)	50	60	120	1K	10K	50K	Temperature (°C)	+20	+45	+70	+85
Rate Voltage (V)							Factor	1.50	1.48	1.30	1.00
16 - 100	0.88	0.90	1.00	1.15	1.15	1.15					
160 - 250	0.77	0.80	1.00	1.50	1.60	1.63					
315 - 450	0.88	0.90	1.00	1.15	1.15	1.15					

OUTLINE DRAWINGS inch(mm)



STANDARD RATING

WV (V) Cap (μF)	16	25	35	50	63	80	100
470							0.87X1.18(22X30)
680						0.87X1.18(22X30)	0.87X1.57(22X40)
1000					0.87X1.18(22X30)	0.87X1.57(22X40)	0.98X1.57(25X40)
1500				0.87X1.18(22X30)	0.87X1.57(22X40)	0.87X1.57(22X40)	0.98X1.97(25X50)
2200			0.87X1.18(22X30)	0.87X1.57(22X40)	0.98X1.57(25X40)	0.98X1.97(25X50)	1.18X1.97(30X50)
3300		0.87X1.18(22X30)	0.87X1.57(22X40)	0.98X1.57(25X40)	0.98X1.97(25X50)	1.18X1.97(30X50)	1.38X1.97(35X50)
4700	0.87X1.18(22X30)	0.87X1.57(22X40)	0.98X1.57(25X40)	0.98X1.97(25X50)	1.18X1.97(30X50)	1.18X1.97(30X50)	1.38X2.48(35X63)
6800	0.87X1.18(22X30)	0.98X1.57(25X40)	0.98X1.97(25X50)	1.18X1.97(30X50)	1.18X1.97(30X50)	1.38X2.48(35X63)	1.38X3.94(35X100)
10000	0.98X1.57(25X40)	1.18X1.97(30X50)	1.18X1.97(30X50)	1.38X2.48(35X63)	1.38X3.15(35X80)	1.38X3.94(35X100)	
15000	1.18X1.97(30X50)	1.18X2.48(30X63)	1.38X2.48(35X63)	1.38X3.15(35X80)	1.38X3.94(35X100)		
22000	1.18X2.48(30X63)	1.38X2.48(35X63)	1.38X3.15(35X80)	1.38X3.94(35X100)			
33000	1.38X2.48(35X63)	1.38X3.15(35X80)	1.57X3.94(40X100)				
47000	1.38X3.15(35X80)	1.57X3.94(40X100)					
68000	1.57X3.94(40X100)						

WV (V) Cap (μF)	160	200	250	315	350	400	450
33						0.87X1.18(22X30)	0.87X1.18(22X30)
47				0.87X1.18(22X30)	0.87X1.18(22X30)	0.87X1.57(22X40)	0.87X1.57(22X40)
68			0.87X1.18(22X30)	0.87X1.57(22X40)	0.87X1.57(22X40)	0.98X1.57(25X40)	0.98X1.57(25X40)
100		0.87X1.18(22X30)	0.87X1.57(22X40)	0.98X1.57(25X40)	0.98X1.57(25X40)	0.98X1.97(25X50)	1.18X1.97(30X50)
150	0.87X1.18(22X30)	0.87X1.57(22X40)	0.98X1.57(25X40)	0.98X1.97(25X50)	0.98X1.97(25X50)	1.18X1.97(30X50)	1.38X1.97(35X50)
220	0.87X1.57(22X40)	0.98X1.57(25X40)	0.98X1.97(25X50)	1.18X1.97(30X50)	1.18X1.97(30X50)	1.38X1.97(35X50)	1.38X2.48(35X63)
330	0.98X1.97(25X50)	0.98X1.97(25X50)	1.18X1.97(30X50)	1.38X1.97(35X50)	1.38X1.97(35X50)	1.38X2.48(35X63)	1.38X3.15(35X80)
470	1.18X1.97(30X50)	1.18X1.97(30X50)	1.38X1.97(35X50)	1.38X2.48(35X63)	1.38X3.15(35X80)	1.38X3.94(35X100)	1.57X3.94(40X100)
680	1.38X1.97(35X50)	1.38X1.97(35X50)	1.38X2.48(35X63)	1.38X3.15(35X80)	1.38X3.94(35X100)	1.57X3.94(40X100)	
1000	1.38X2.48(35X63)	1.38X2.48(35X63)	1.38X3.15(35X80)	1.57X3.94(40X100)	1.57X3.94(40X100)		
1500	1.38X3.15(35X80)	1.38X3.94(35X100)	1.57X3.94(40X100)				
2200	1.57X3.94(40X100)	1.57X3.94(40X100)					