

TD* Series

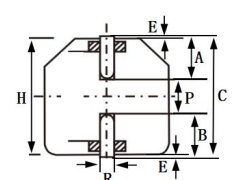
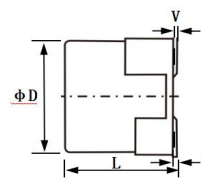
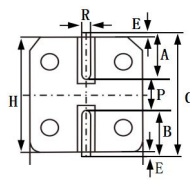
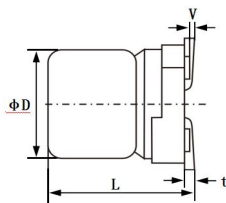
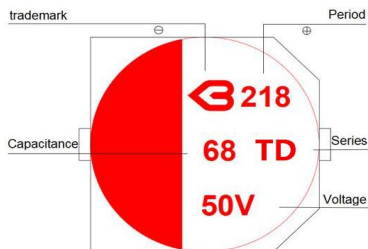


- High reliability hybrid capacitors for automotive equipment electronics
- Endurance with ripple current : 2000~4000 hours at 135°C
- High Voltage: 16~250V
- RoHS compliant
- Halogen Free
- AEC-Q200 compliant

◆ Specifications

Items	Characteristics		
Category	-55 ~ +135°C		
Temperature Range	-55 ~ +135°C		
Rated Voltage Range	25 ~ 63 V		
Capacitance tolerance	±20%(M) (at 20°C,120Hz)		
Leakage Current	≤0.01CV or 10μA (The bigger) After 2 minutes applied for rated voltage at 20°C, less than or equal to the specified value.		
Dissipation Factor	Less than or equal to the specified		
Low Temperature Characteristics (Max.Impedance Ratio)	Z(-55°C)/Z(+20°C)	≒ 0.75 to 1.5	(100KHz)
	Z(+135°C)/Z(+20°C)	≒ 0.75 to 2.0	
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 4,000 hours at 135°C.		
	Appearance	No significant damage	
	Capacitance change	≒ ±30% of the initial value	
	D.F.(tanδ)	≒ 200% of the specified value	
	ESR	≒ 200% of the specified value	
	Leakage current	≒ The specified value	
Damp Heat (Steady State)	The specifications listed below shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 60°C, 90%~ 95% RH.		
	Appearance	No significant damage	
	Capacitance change	≒ ±30% of the initial value	
	D.F.(tanδ)	≒ 200% of the specified value	
	ESR	≒ 200% of the specified value	
	Leakage current	≒ The specified value	
(Surge Voltage)	Surge Voltage=Rated voltage * 1.25(V) The capacitors shall be subjected to 1,000 cycles each consisting of charge with the surge voltages specified at 15~35°C for 30 seconds through a protective resistor (R=1kΩ) and discharge for 5 minutes 30seconds		
	Appearance	No significant damage	
	Capacitance change	≒ ±30% of the initial value	
	D.F.(tanδ)	≒ 200% of the specified value	
	ESR	≒ 200% of the specified value	
	Leakage current	≒ The specified value	

◆ Dimensions (mm)



(Unit:mm)

Vibration resistant structure

Size	ΦD	L	W	H	C	R	P
10*12.5	10	12.5	10.3	10.3	11	0.7~1.3	4.6
10*16.5	10	16.5	10.3	10.3	11	0.7~1.3	4.6

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◆ Standard Ratings

Rated voltage (V)	Rated capacitance(μ F)	Case size Φ D*L(mm)	Leakage current (μ A)	ESR(m Ω) at 20°C, 100 KHz	Rated ripple current (mA _{rms} /135°C/100kHz)	tan δ (120Hz)
25	470	10*12.5	117.5	14	2500	0.14
	560	10*16.5	140.0	10	2900	0.14
35	330	10*12.5	115.5	14	2500	0.12
	470	10*16.5	164.5	11	2900	0.12
50	150	10*12.5	75.0	17	2250	0.10
	220	10*16.5	110.0	13	2600	0.10
63	100	10*12.5	63.0	19	2100	0.08
	150	10*16.5	94.5	15	2400	0.08

◆ Rated Ripple Current Coefficient

Frequency(Hz)	100Hz \leq f<1kHz	1kHz \leq f<10kHz	10kHz \leq f<100kHz	100kHz \leq f
4.7<C \leq 33	0.05	0.32	0.67	1.00
33<C	0.10	0.35	0.70	1.00