

TH Series

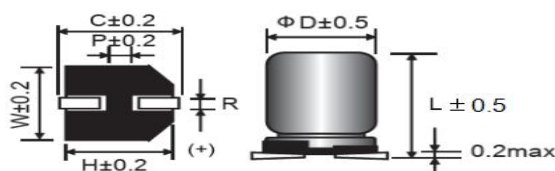
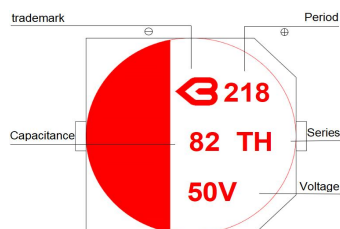
- Low ESR
- High Voltage, Long Life.
- 135°C, 1,000~3,000hrs.
- RoHS compliant
- AEC-Q200 qualified



◆ Specifications

Items	Characteristics		
Category	-55 ~ +135℃		
Temperture Range	16 ~ 250 V		
Rated Voltage Range	±20%(M) (at 20℃,120Hz)		
Capacitance tolerance			
Leakage Current	≤0.01CV or 10μA (The bigger) After 2 minutes applied for rated voltage at 20℃, less than or equal to the specified value.		
Dissipation Factor	Less than or equal to the specified		
Low Temperture Characteristics (Max.Impedance Ratio)	Z(-55℃)/Z(+20℃)	≒ 0.75 to 1.5	(100KHz)
	Z+125℃)/Z(+20℃)	≒ 0.75 to 2.0	
Endurance	ΦD=Φ6.3=1,000hrs, ΦD=Φ8=2,000hrs, ΦD≧Φ10=3,000hrs; The following specifications shall be satisfied when the capacitors are restored to 20℃after the rated voltage is applied for1,000 to 3,000 hours at 135℃. ΦD=Φ6.3=1,000hrs,ΦD=Φ8=2,000hrs, ΦD≧Φ10=3,000hrs;		
	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℃ after the rated voltage is applied for 1000 hours at 60℃, 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 * 1.15(V) The capacitors shall be subjected to 1,000 cycles each consisting of charge with the surge voltages specified at 15~35℃ for 30 seconds through aprotective 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)

Size	ΦD	L	W	H	C	R	P
6.3*11.5	6.3	7.7	6.6	6.6	7.3	0.5~0.8	2.1
8*10.5	8	10.5	8.3	8.3	9	0.7~1.1	3.2
10*10.5	10	10.5	10.3	10.3	11	0.7~1.3	4.6
10*12.5	10	12.5	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 $\Phi D \times L$ (mm)	Leakage current (μ A)	ESR($m\Omega$) at 20℃,100 KHz	Rated ripple current (mA _{rms} /135℃/100kHz)	$\tan\delta$ (120Hz)
16	120	6.3*11.5	19.2	40	900	0.16
	270	8*12.5	43.2	30	1300	0.16
	470	10*12.5	75.2	25	1800	0.16
25	68	6.3*11.5	17.0	45	800	0.16
	150	10*10.5	37.5	30	1100	0.16
	270	10*12.5	67.5	25	1300	0.16
35	47	6.3*11.5	16.5	60	700	0.16
	100	10*10.5	35.0	40	1000	0.16
	150	10*12.5	52.5	30	1200	0.16
50	15	6.3*11.5	10.0	80	600	0.16
	33	10*10.5	16.5	50	900	0.16
	56	10*12.5	28.0	35	1100	0.16
63	10	6.3*11.5	10.0	100	500	0.16
	22	10*10.5	13.9	50	800	0.16
	33	8*12.5	20.8	50	800	0.16
	33	10*12.5	20.8	40	1000	0.16
80	12	10*12.5	10.0	90	700	0.16
	15	10*12.5	12.0	90	700	0.16
100	10	10*12.5	10.0	100	600	0.16
160	6.8	10*12.5	10.9	150	480	0.16
250	4.7	10*12.5	11.8	465	200	0.16

◆ Rated Ripple Current Coefficient

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