

THV SERIES

125°C Low ESR, Lead Free Reflow Soldering

◆FEATURES

- Load Life : 125°C 2000~3000 hours Low ESR.
- Lead free reflow soldering is available.
- Available for high density mounting.
- RoHS compliance.

◆SPECIFICATIONS

Items	Characteristics				
Category Temperature Range	-40~+125°C				
Rated Voltage Range	16~50Vdc				
Capacitance Tolerance	±20% (20°C, 120Hz)				
Leakage Current(MAX)	$I=0.01CV$ or $3\mu A$ whichever is greater. (After 2 minutes application of rated voltage) $I=$ Leakage Current(μA) $C=$ Capacitance(μF) $V=$ Rated Voltage(Vdc)				
(tan δ) Dissipation Factor(MAX)	Rated Voltage (Vdc)	16	25	35	50
	tan δ	0.23	0.18	0.16	0.14
Endurance	After applying rated voltage with rated ripple current for specified time at 125°C, the capacitors shall meet the following requirements.				
	Capacitance Change	Within ±30% of the initial value.			Case Size
	Dissipation Factor	Not more than 300% of the specified value.			$\phi D=6.3$ 2000
	Leakage Current	Not more than the specified value.			$\phi D \geq 8$ 3000
Low Temperature Stability Impedance Ratio(MAX)	Rated Voltage (Vdc)	16	25	35	50
	$Z(-40^\circ C)/Z(20^\circ C)$	4	4	3	3

◆DIMENSIONS

(mm)

φD	L	A1	B1	C	W1	P
6.3	6.1	6.6	6.6	2.7	0.5~0.8	1.8
6.3	8	6.6	6.6	2.7	0.5~0.8	1.8
8	10.5	8.3	8.3	2.9	0.8~1.1	3.1
10	10.5	10.3	10.3	3.2	0.8~1.1	4.5

◆MARKING

Rated Voltage (Vdc)	16	25	35	50
Rated Voltage code	C	E	V	H

◆MULTIPLIER FOR RIPPLE CURRENT

Frequency (Hz)	120	1k	10k	100k≤
10~33μF	0.45	0.75	0.90	1.00
47~100μF	0.50	0.80	0.95	1.00
220~330μF	0.60	0.85	0.95	1.00

◆STANDARD SIZE

Size φD×L(mm), Rated Ripple Current (mA r.m.s./125°C, 100kHz), ESR(Ω MAX/100kHz)

Vdc	Cap (μF)	Size (φD×L)	Ripple	ESR	
				20°C	-40°C
16	33	6.3×6.1	70	1	15
	47	6.3×8	200	0.7	10
	100	6.3×8	200	0.7	10
		8×10.5	300	0.3	4.5
	220	8×10.5	300	0.3	4.5
		10×10.5	500	0.2	3
	330	10×10.5	500	0.2	3

Vdc	Cap (μF)	Size (φD×L)	Ripple	ESR	
				20°C	-40°C
25	33	6.3×6.1	70	1	15
	47	6.3×8	200	0.7	10
	100	8×10.5	300	0.3	4.5
		8×10.5	300	0.3	4.5
	220	10×10.5	500	0.2	3
		10×10.5	500	0.2	3

Vdc	Cap (μF)	Size (φD×L)	Ripple	ESR	
				20°C	-40°C
35	22	6.3×8	200	0.7	10
	33	6.3×6.1	70	1	15
		6.3×8	200	0.7	10
	47	6.3×8	200	0.7	10
		8×10.5	300	0.3	4.5
		8×10.5	300	0.3	4.5
	100	10×10.5	500	0.2	3
		10×10.5	500	0.2	3
	220	10×10.5	500	0.2	3
		10×10.5	500	0.2	3
50	10	6.3×6.1	70	1	15
	22	6.3×8	150	0.9	10
	33	6.3×8	150	0.9	10
		8×10.5	250	0.36	4.5
	47	8×10.5	250	0.36	4.5
		10×10.5	350	0.25	3
	100	10×10.5	350	0.25	3
		10×10.5	350	0.25	3

◆PART NUMBER

□□□	THV	□□□□□	M	□□□	D×L
Rated Voltage	Series	Capacitance	Capacitance Tolerance	Option	Case Size