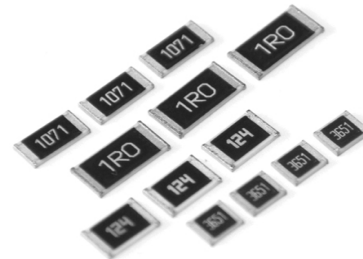


THIN FILM LOW OHMIC CHIP RESISTORS

(TML SERIES)

Application

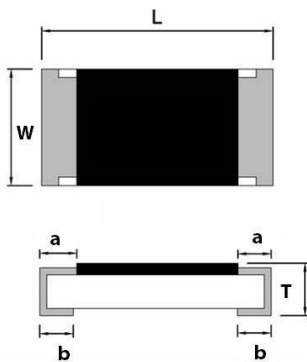
Power Management Applications
 Switching Power Supply
 Over Current Protection in Audio Applications
 Portable Devices (PDA, Cell Phone)
 Automotive Engine Control
 DC-DC Converter, Battery Pack, Charger, Adaptor



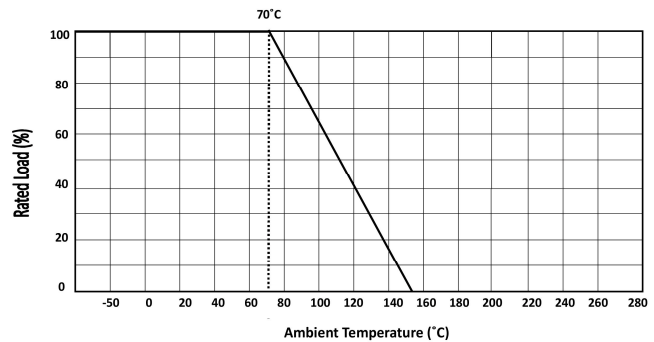
Features

Precision tolerance $\pm 0.5\% \sim 1\%$
 Very low TCR from $\pm 50 \sim \pm 200 \text{ppm}/^\circ\text{C}$
 Resistance range from 50m \sim 976m ohms
 Pb-free terminations, RoHS compliant
 High Power rating up to 3W in 2512 size

Dimensions



Derating Curve



unit: mm

Style	Dimensions : mm				
	L	W	T	a	b
TML-04/0402	1.00 \pm 0.05	0.50 \pm 0.05	0.32 \pm 0.10	0.25 \pm 0.10	0.20 \pm 0.10
TML-06/0603	1.60 \pm 0.10	0.80 \pm 0.10	0.45 \pm 0.10	0.30 \pm 0.20	0.30 \pm 0.20
TML-10/0805	2.00 \pm 0.15	1.25 \pm 0.15	0.55 \pm 0.10	0.30 \pm 0.20	0.40 \pm 0.25
TML-18/1206	3.05 \pm 0.15	1.55 \pm 0.15	0.55 \pm 0.10	0.50 \pm 0.30	0.40 \pm 0.25
TML-22/2010	5.00 \pm 0.20	2.45 \pm 0.15	0.60 \pm 0.15	0.60 \pm 0.30	0.50 \pm 0.25
TML-24/2512	6.35 \pm 0.20	3.15 \pm 0.15	0.60 \pm 0.15	0.60 \pm 0.30	0.50 \pm 0.25
TML-24P/2512	6.35 \pm 0.20	3.15 \pm 0.15	0.60 \pm 0.15	0.60 \pm 0.30	0.50 \pm 0.25



Electrical Characteristics

Style	Power rating at 70°C	Operating Temp. Range	Resistance Tolerance	Resistance Range	TCR (PPM/°C)
TML-04 0402	1/16W	-55°C~+ 155°C	±0.5% ± 1 %	500mΩ~976mΩ	±100 ±50
TML-06 0603	1/10W		±0.5%	200mΩ~300mΩ 301mΩ~976mΩ	±100 ±50
TML-10 0805	1/8W		±1%	200mΩ~300mΩ 301mΩ~976mΩ	±100 ±50
TML-18 1206	1/4W		±1%	50mΩ~100mΩ 101mΩ~300mΩ	±200 ±100
TML-22 2010	3/4W		±0.5% ±1%	301mΩ~976mΩ 50mΩ~100mΩ	±50 ±200
TML-24 2512	1W		101mΩ~300mΩ 301mΩ~976mΩ	±100	
TML-24P 2512	3W		± 1%	100mΩ~976mΩ	±100

Characteristics

Performance test	Test Method	Rating
Temperature Coefficient of Resistance	MIL-STD-202F Method 304 +25/-55/+125/+25°C	Per Spec
Short Time Overload	JIS-C-5205-5.5 RCWV*2.5 or Max Overloading Voltage 5 seconds	±1%
Dielectric Withstand Voltage	MIL-STD-202F Method 301 Apply Max Overloading Voltage for 1 minute	by type
Insulation Resistance	MIL-STD-202F Method 302 Apply 100VDC for 1 minute	> 1000MΩ
Thermal Shock	MIL-STD-202F Method 107G -55°C~155°C, 100cycles	±0.5%



Performance test	Test Method	Rating
Load Life	MIL-STD-202F Method 108A RCWV,70°C , 1.5 hours on, 0.5 hours OFF, Total 1000~1048 hours	±1%
Humidity (steady State)	MIL-STD-202F Method 103B 40°C ,90~95%RH, RCWV 1.5 hours ON, 0.5hours OFF Total 1000~1048 hours	±0.5%
Resistance to Dry Heat	JIS-C-5202-7.2 <u>96 hours@+155°C</u> without load	±0.5%
Low Temperature Operation	JIS-C-5202-7.1 1 hour,-65°C followed by 45 minutes of RCWV	±0.5%
Bending Strength	JIS-C-5202-6.1.4 Bending Amplitude 3 mm for 10 seconds	Per Spec
Solderability	MIL-STD-202F Method 208H 260°C ± 5°C, 2 ±0.5 (sec)	95% min coverage
Resistance to Soldering Heat	MIL-STD-202F Method 208H 260±5°C, 10±1 seconds	±0.5%

Parts Number System

TML – 06		0R50	J	R
Type	Size and Wattages	Resistance	Tolerance	Standard Packing
Thin Film Low ohmic Chip Resistor		0R50=0.5ohm 0R05=0.05ohm	J = ±5% F= ±1%	R=Paper tape reel K=Embossed plastic tape reel Please refer to packaging explanation

