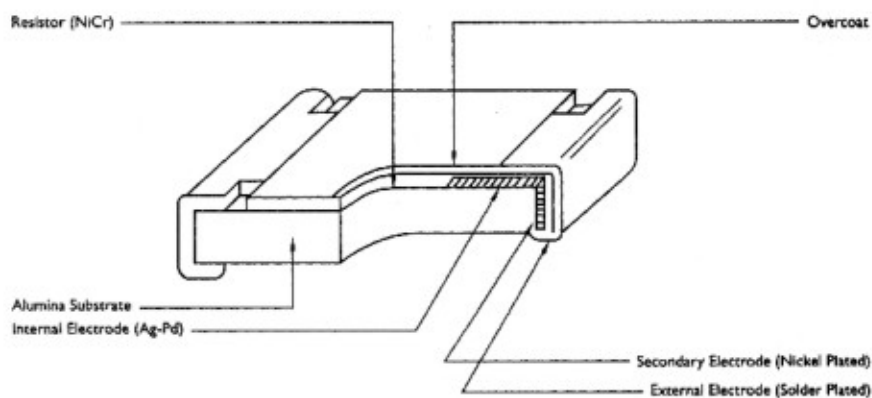


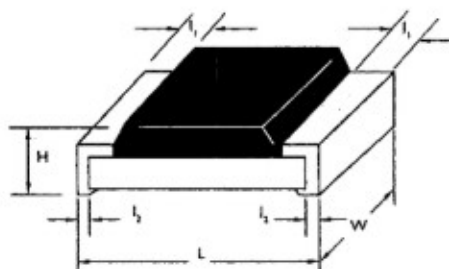
**THUNDER**<sup>®</sup>**Thin Film Chip Resistors/RT Series (HIGH PRECISION)****FEATURES**

High Stability

Low TCR / Low Noise

High Accuracy ( $\pm 0.1\%$ ,  $\pm 0.5\%$ )**DIMENSIONS**

Unit : mm



STYLE	L	W	H	$l_1$	$l_2$
RT0201	$0.60 \pm 0.10$	$0.30 \pm 0.05$	$0.25 \pm 0.05$	$0.15 \pm 0.10$	$0.15 \pm 0.10$
RT0402	$1.00 \pm 0.10$	$0.50 \pm 0.05$	$0.30 \pm 0.05$	$0.20 \pm 0.10$	$0.25 \pm 0.10$
RT0603	$1.60 \pm 0.10$	$0.80 \pm 0.10$	$0.45 \pm 0.10$	$0.25 \pm 0.15$	$0.25 \pm 0.15$
RT0805	$2.00 \pm 0.10$	$1.25 \pm 0.10$	$0.50 \pm 0.10$	$0.35 \pm 0.20$	$0.35 \pm 0.20$
RT1206	$3.10 \pm 0.10$	$1.60 \pm 0.10$	$0.55 \pm 0.10$	$0.45 \pm 0.20$	$0.40 \pm 0.20$
RT1210	$3.10 \pm 0.10$	$2.60 \pm 0.15$	$0.55 \pm 0.10$	$0.50 \pm 0.20$	$0.50 \pm 0.20$
RT2010	$5.00 \pm 0.10$	$2.50 \pm 0.15$	$0.55 \pm 0.10$	$0.60 \pm 0.20$	$0.50 \pm 0.20$
RT2512	$6.35 \pm 0.10$	$3.20 \pm 0.15$	$0.55 \pm 0.10$	$0.60 \pm 0.20$	$0.50 \pm 0.20$

## ELECTRICAL CHARACTERISTICS

STYLE	RT0201			RT0402			RT0603			RT0805		
Resistance Range in E24/E96 (E192; Special Value on Request)	10Ω ~ 30KΩ (<10Ω; 30 ~ 56KΩ on Request)			10Ω ~ 121KΩ (<10Ω; 121 ~ 220KΩ on Request)			3Ω ~ 681KΩ (<3Ω; 681 ~ 750KΩ on Request)			3Ω ~ 1.5MΩ (<3Ω; 1.5 ~ 2MΩ on Request)		
Operating Mode	Precision	Standard	Power	Precision	Standard	Power	Precision	Standard	Power *	Precision	Standard	Power *
Power Rating @ 70°C	1/64W	1/20W	1/16W	1/64W	1/16W	1/10W	1/32W	1/10W	1/8W	1/20W	1/8W	1/5W
Operation Temperature Range	-10°C to +85°C for Precision Type; -55°C to +125°C for Standard; -55°C to +155°C for Power Type											
Maximum Working Voltage	5V	15V	15V	12.5V	50V	50V	25V	75V	75V	35V	150V	150V
Maximum Overload Voltage	10V	50V	50V	25V	100V	100V	50V	150V	150V	70V	300V	300V
Dielectric Withstand Voltage	50V	50V	50V	75V	75V	75V	100V	100V	100V	200V	200V	200V
Resistance Tolerance	±0.1% ; ±0.25% ; ±0.5% ; ±1.0% (±0.01% ; ±0.05% on Request)											
Temperature Coefficient	±25ppm/°C ; ±50ppm/°C (±10ppm/°C ; ±15ppm/°C on Request)											

STYLE	RT1206			RT1210			RT2010		RT2512	
Resistance Range in E24/E96 (E192; Special Value on Request)	3Ω ~ 1.5MΩ (<3Ω; 1.5 ~ 2M on Request)			1Ω ~ 1MΩ (1M ~ 2MΩ on Request)			10Ω ~ 1MΩ (<10Ω; 1M ~ 2MΩ on Request)		10Ω ~ 1MΩ (<10Ω; 1M ~ 2MΩ on Request)	
Operating Mode	Precision	Standard	Power **	Precision	Standard	Power	Standard	Power	Standard	Power
Power Rating @ 70°C	1/10W	1/8W	1/4W	1/8W	1/4W	2/5W	1/2W	3/4W	3/4W	1W
Operation Temperature Range	-10°C to +85°C for Precision Type; -55°C to +125°C for Standard; -55°C to +155°C for Power Type									
Maximum Working Voltage	50V	200V	200V	50V	200V	200V	200V	200V	200V	200V
Maximum Overload Voltage	100V	400V	400V	100V	400V	400V	400V	400V	400V	400V
Dielectric Withstand Voltage	300V	300V	300V	400V	400V	400V	400V	400V	400V	400V
Resistance Tolerance	±0.1% ; ±0.25% ; ±0.5% ; ±1.0% (±0.01% ; ±0.05% on Request)									
Temperature Coefficient	±25ppm/°C ; ±50ppm/°C (±10ppm/°C ; ±15ppm/°C on Request)									

\* Power Mode on Request for RT0603 and RT0805

\*\* Power Mode on Request for RT1206

## ELECTRICAL CHARACTERISTICS

PERFORMANCE TEST	TEST METHOD		APPRAISE
Temperature Coefficient	MIL-STD-202F, Method 304	LCT to UCT	by Type
Thermal Shock	MIL-STD-202F, Method 107G	25 Cycles, -65°C to +125°C (Step by Step 2 min.)	±(0.5%+0.05Ω)*
Low Temperature Operation	MIL-R-55342D, Para.4.7.4	One Hour at LCT Followed by 45 Minutes RCWV	±(0.5%+0.05Ω)*
Short Time Overload	MIL-R-55342D, Para.4.7.5	2.5 Times RCWV for 5 Seconds	±(0.5%+0.05Ω)*
Insulation Resistance	JIS-C-5202, 5.6	RCOV for 1 Minute	>10GΩ
Dielectric Withstand Voltage	JIS-C-5202, 5.7	R.M.S. for 1 Minute	by Type
Resistance to Soldering Heat	MIL-STD-202F, Method 210C	Soldered to Test Board at 260°C for 10 Seconds	±(0.5%+0.05Ω)*
Moisture Resistance	MIL-STD-202F, Method 106F	42 Cycles, Total 1000 Hours	±(0.5%+0.05Ω)*
Life	MIL-STD-202F, Method 108A	1000 Hours at 70°C RCWV Intermittent	±(0.5%+0.05Ω)*
Solderability	JIS-C-5202, 6.11	230°C for 5 Seconds	>95% Coverage
Bending Strength	JIS-C-5202, 6.1.4	Unit Mounted in Center of 90mm Board Length, Deflected 2mm (by Style) in Either Direction for 5 Seconds	±(0.25%+0.05Ω)*

\* High Stability, ±0.1% or 0.25%, on Request