

F

RoHS

RTH



				( IE-SP-054)
<b>01(0201)</b> <b>02(0402)</b> <b>03(0603)</b> <b>05(0805)</b> <b>06(1206)</b> <b>12(1210)</b> <b>20(2010)</b> <b>25(2512)</b>	3-	<b>EX. 10 =100</b> <b>4.7 =4R7</b> <b>JUMPER=000</b>	<b>B± 0.1%</b> <b>D± 0.5%</b> <b>F± 1%</b> <b>G± 2%</b> <b>J± 5%</b>	<b>Q1 1 mm Pitch</b> Carrier Tape 20000 pcs <b>QE 1 mm Pitch</b> Carrier Tape 150000 pcs <b>TH 2 mm Pitch</b> Carrier Tape 10000 pcs <b>H0 2 mm Pitch</b> Carrier Tape 15000 pcs <b>H2 2 mm Pitch</b> Carrier Tape 20000 pcs <b>H3 2 mm Pitch</b> Carrier Tape 30000 pcs <b>H4 2 mm Pitch</b> Carrier Tape 40000 pcs <b>H5 2 mm Pitch</b> Carrier Tape 50000 pcs <b>H6 2 mm Pitch</b> Carrier Tape 60000 pcs <b>TP 4 mm Pitch</b> Carrier Tape 5000 pcs <b>P2 4 mm Pitch</b> Carrier Tape 10000 pcs <b>P3 4 mm Pitch</b> Carrier Tape 15000 pcs <b>P4 4 mm Pitch</b> Carrier Tape 20000 pcs <b>TE 4 mm Pitch</b> Carrier Tape 4000 pcs <b>BA ( )</b>
	4-	<b>EX. 10.2 =10R2</b> <b>10K =1002</b> <b>JUMPER=0000</b>		

IE

QA

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RTH

3.1 : 1 & 0

									Ω		Ω	
$\frac{1}{16}$ W	25V	50V	-200 +400	-----	1 R 10	1 R 10	1 R 10	--	--	--	--	
			±200	-----	10 R 10M	10 R 10M	10 R 10M					
$\frac{1}{8}$ W	50V	100V	±100	100 R 1M	10 R 1M	10 R 10M	10 R 20M	1.5A	2A	50m MAX.	20m MAX.	
			±200	-----	-----	1 R 10	1 R 10					
$\frac{1}{5}$ W	75V	150V	±100	100 R 1M	10 R 1M	10 R 10M	10 R 20M	1.5A	2.5A	50m MAX.	20m MAX.	
			±200	-----	1 R 10	1 R 10	1 R 10					
$\frac{1}{4}$ W	150V	300V	±100	100 R 1M	10 R 10M	10 R 10M	10 R 20M	2.5A	3.5A	50m MAX.	20m MAX.	
			±200	-----	1 R 10	1 R 10	1 R 10					
$\frac{1}{2}$ W	200V	400V	±100	10 R 1M	10 R 10M	10 R 10M	10 R 20M	3A	5A	50m MAX.	20m MAX.	
			±200	3 R 10	1 R 10	1 R 10	1 R 10					
$\frac{3}{4}$ W	200V	400V	±100	100 R 1M	10 R 10M	10 R 10M	10 R 20M	4A	6A	50m MAX.	20m MAX.	
			±200	-----	-----	1 R 10	1 R 10					
1W	200V	400V	±100	-----	-----	10 R 10M	10 R 10M	4.5A	7A	50m MAX.	20m MAX.	
			±200	-----	-----	1 R 10	1 R 10					
2W	200V	400V	±100	-----	-----	10 R 10M	10 R 10M	6A	10A	50m MAX.	20m MAX.	
			±200	-----	-----	1 R 10	1 R 10					
					-55 ~ +155 (0201:-55 ~ +125 )							

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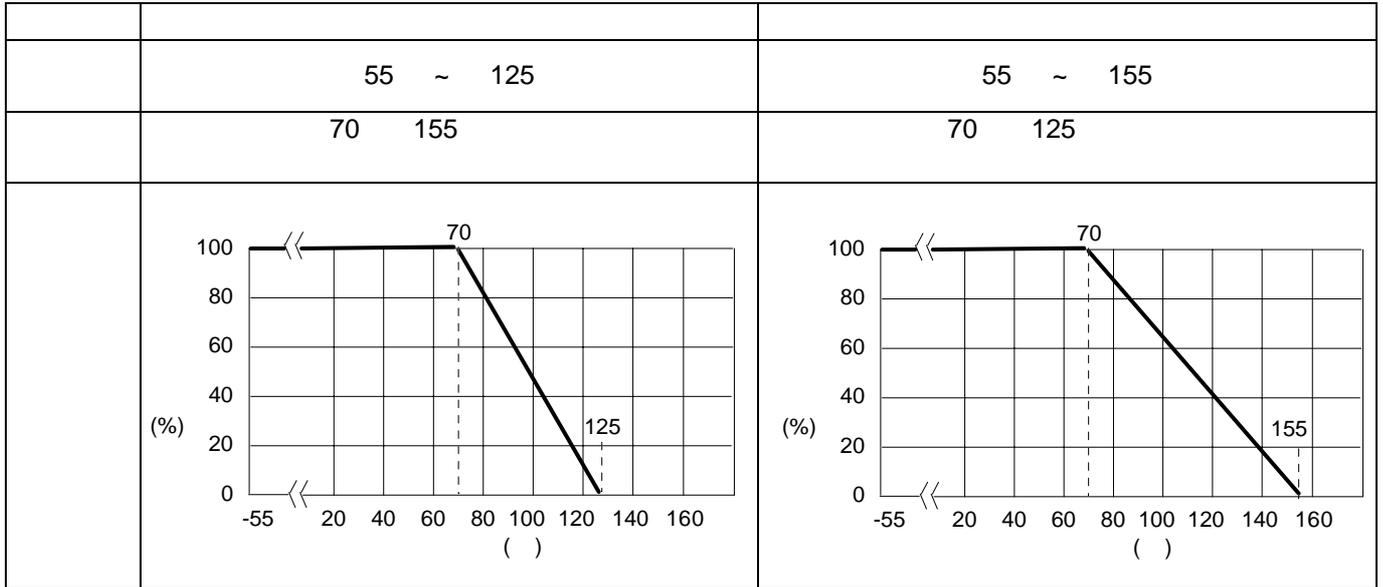
3.2 : 1



	<div data-bbox="405 2007 868 2087" style="border: 1px solid black; width: 290px; height: 36px;"></div>	DATA Center.
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# RTH

## 3.3



## 3.4

3.4.1

: 1

:

( rms)

$$E = \sqrt{R \times P}$$

E= (V)

P= (W)

R= ( )

3.4.2

: 1

:

( rms.)

$$I = \sqrt{P/R}$$

I= (A)

P= (W)

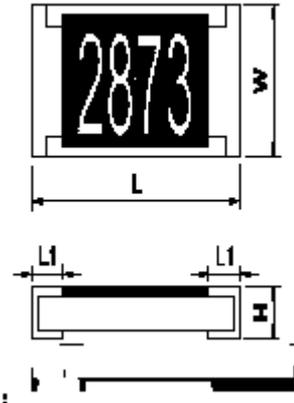
R= ( )

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# RTH

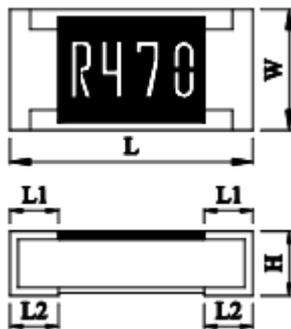
4.1 : 1



Unit:mm

Dimension		L	W	H	L1	L2
Type	Size Code					
		0.60±0.03	0.30±0.03	0.23±0.03	0.15±0.05	0.15±0.05
		1.00±0.10	0.50±0.05	0.30±0.05	0.20±0.10	0.25±0.10
		1.55±0.10	0.80±0.10	0.45±0.10	0.30±0.15	0.30±0.15
		2.00±0.10	1.25±0.10	0.50±0.10	0.35±0.20	0.35±0.15
		3.05±0.10	1.55±0.10	0.50±0.10	0.45±0.20	0.35±0.15
		3.05±0.10	2.55±0.10	0.55±0.10	0.50±0.20	0.50±0.20
		4.95±0.10	2.45±0.10	0.70±0.10	0.65±0.20	0.60±0.20
		6.40±0.20	3.20±0.20	0.70±0.10	0.60±0.20	1.25±0.20

4.2 : 1



Unit:mm

Dimension		L	W	H	L1	L2
Type	Size Code					
		1.00±0.10	0.50±0.10	0.35±0.10	0.25±0.10	0.20±0.15
		1.60±0.10	0.80±0.10	0.45±0.10	0.25±0.15	0.35±0.15
		2.00±0.10	1.25±0.10	0.50±0.10	0.35±0.20	0.35±0.20
		3.05±0.10	1.55±0.10	0.50±0.10	0.45±0.20	0.65±0.15
		3.05±0.10	2.55±0.10	0.55±0.10	0.50±0.20	0.50±0.20
		4.95±0.10	2.45±0.10	0.70±0.10	0.65±0.20	0.70±0.20
		6.40±0.20	3.20±0.20	0.70±0.10	0.72±0.20	0.69±0.20

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	RTH		

5.1 : 1

1

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		Series No. <b>60</b>

RTH

RTH

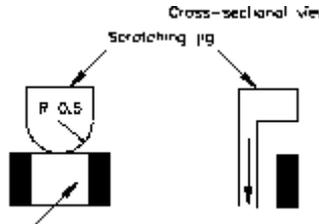
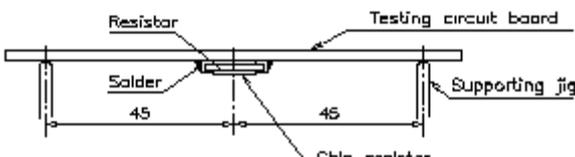
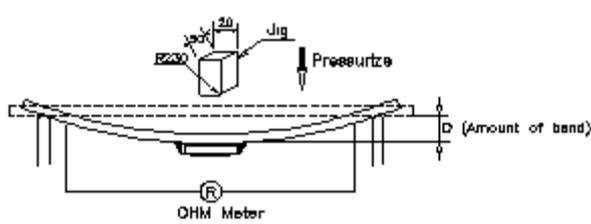
6.2 (Mechanical Performance Test)

Item	Conditions	Specifications
		Resistors
Core Body Strength	R0.5 10N 1.02 kgf 10 sec. 1.RTH02 03 R0.2mm 2.RTH05 06 12 20 25 R0.5mm JIS-C5201-1 4.15	1. : 1 ΔR%=±1.0% 2. : 1 ΔR%= ±1.0%
Terminal Strength	: 5N (RTH01:3N) 10sec : JIS-C5201-1 4.16	: :RTH01 3N Other 5N
Resistance to Solvent	20~25 5±0.5 48hr JIS-C5201-1 4.29	1. : 1 RTH01 ΔR%= ± 1.0% ΔR%=± 0.5% 2. : 1 ΔR%= ± 1.0% G2 Leaching
Solderability	: PCT 105 100% 1.22×10 <sup>5</sup> pa 4 2 235±3 2±0.5 JIS-C5201-1 4.17	1. : 95%
Resistance to Soldering Heat	( ): 60 260+5/-0 10 +1/-0 ( ) 260+5/-0 30+1/-0 ( ): :350±10 :3+1/-0 sec. 60 JIS-C5201-1 4.18	: (1). : 1 ΔR%=±1.0% 2. : 1 ΔR%=±1.0% (2). (1). : 95% (2). ( ) (1). : 1. : 1 ΔR%=±1.0% 2. : 1 ΔR%=±1.0% (2).

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# RTH

Item	Conditions	Specifications
		Resistors
Joint Strength of Solder	: PCT 105 100% ( ) $1.22 \times 10^5 \text{ pa}$ 4 ( ): R0.5 10sec : 1.RTH01=5N 2.RTH02=10N 3. =20N	: 1. : 1 $\Delta R\% = \pm 1.0\%$ 2. : 1 $\Delta R\% = \pm 1.0\%$ ( ) : ( ) 1. : 1 $\Delta R\% = \pm 1.0\%$ 2. : 1 $\Delta R\% = \pm 1.0\%$ ( )
	 <p>             Cross-sectional view              Scratching jig              F 0.5              Specimen           </p> <p>             JIS-C5201-1 4.32              ( ):              (D): RTH02 03 05=5mm              RTH01 06 12=3mm              RTH20 25=2mm           </p>  <p>             Resistor Testing circuit board              Solder Supporting jig              45 45              Chip resistor           </p>  <p>             Jig Pressure              OHM Meter              D (Amount of bend)           </p> <p>             JIS-C5201-1 4.33           </p>	
Vibration	:10Hz ~ 55Hz ~ 10Hz/ :1.5mm :6hrs(X.Y.Z3 2hrs) JIS-C5201-1 4.22	1. : 1 1%: $\Delta R\% = \pm 0.5\%$ 2% 5%: $\Delta R\% = \pm 1.0\%$ 2. : <1 1% 2% 5%: $\Delta R\% = \pm 1.0\%$

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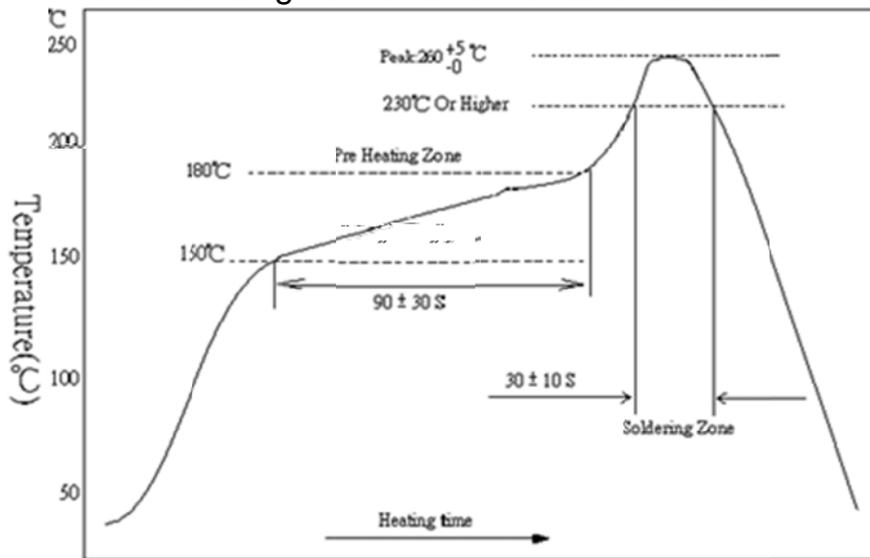
6.3 (Environmental Test)

Item	Conditions			Specifications											
				Resistors											
Resistance to Dry Heat	155±5	1000+48/-0 hrs	1hr	1. : 1 1%: ΔR%=±1.0% 2% 5%: ΔR%=±2.0%	2. : 1 1% 2% 5% : ΔR%=±1.0%										
	JIS-C5201-1 4.25														
Thermal Shock	15	300	60	1. : 1 1%: ΔR%=±0.5% 2% 5%: ΔR%=±1.0%	2. : 1 1% 2% 5% : ΔR%=±1.0%										
	<table border="1"> <tr><td></td><td>-55±5</td></tr> <tr><td></td><td>125±5</td></tr> <tr><td></td><td>15</td></tr> </table>				-55±5		125±5		15						
	-55±5														
	125±5														
	15														
	MIL-STD 202 Method 107														
Loading Life in Moisture	40±2	90~95%		1. : 1 1%: ΔR%=±0.5% 2% 5%: ΔR%=±2.0%	2. : 1 1% 2% 5% : ΔR%=±2.0%										
	90 ON 30 OFF	1,000hrs	60												
	JIS-C5201-1 4.24														
Load Life	70±2	90 ON 30 OFF		1. : 1 1%: ΔR%=±0.5% 2% 5%: ΔR%=±2.0%	2. : 1 1% 2% 5% : ΔR%=±2.0%										
	1,000 hrs	60													
	JIS-C5201-1 4.25														
Low Temperature Operation	-55	60	45	1. : 1 1%: ΔR%=±0.5% 2% 5%: ΔR%=±1.0%	2. : 1 1% 2% 5% : ΔR%=±1.0%										
	15	8±1hr													
	MIL-R-55342D 4.7.4														
Whisker	( ):			Whisker	50μm										
	<table border="1"> <tr><td>2</td><td></td></tr> <tr><td></td><td>-55+0/-10</td></tr> <tr><td></td><td>85+10/-0</td></tr> <tr><td></td><td>10</td></tr> <tr><td></td><td>1,500</td></tr> </table>			2			-55+0/-10		85+10/-0		10		1,500		
2															
	-55+0/-10														
	85+10/-0														
	10														
	1,500														
	40	40													
	1000	1000													
	JESD Standard NO.22A121 class2.														

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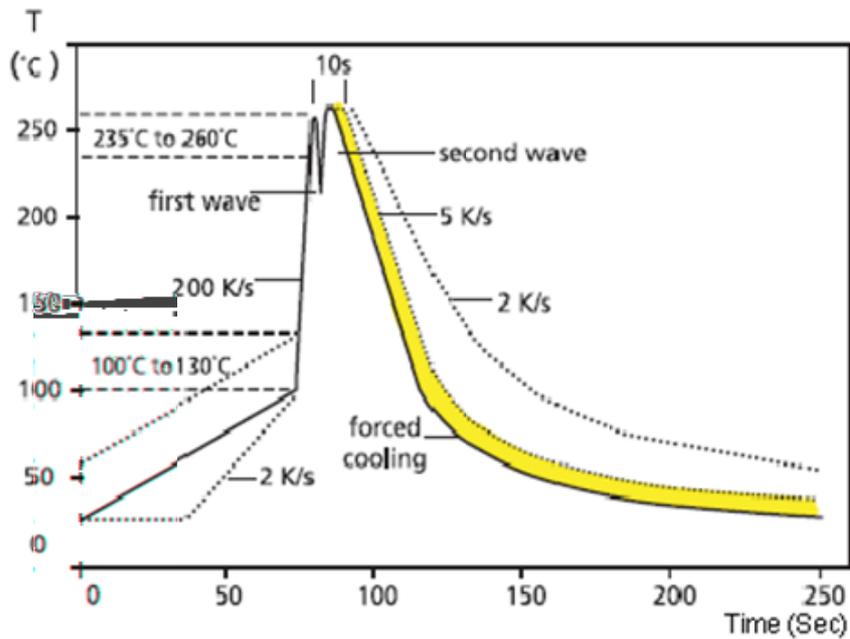
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7.1 Lead Free IR Reflow Soldering Profile



1: Recommended IR Reflow Soldering Profile J-STD-020D  
 2: 260 +5/-0 ,10

7.2 Lead Free Double-Wave Soldering Profile( 0603( ) )



7.3 :350±10 3

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		Series No. <b>60</b>

RTH

11.1          25±5      60±15%



13.1                      (QA-QR-027)

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