

Thick Film General Chip Resistors

- 1005(0402), 1608(0603), 2012(0805), 3216(1206),
3225(1210), 5025(2010), 6432(2512)

■ Features

- Small, thin and lightweight
- High reliability
- Applicable Both flow and reflow soldering.
- Suitable size and package for surface mount assembly
- RoHS Compliant.



■ Part Number System

RC		1005		F		7320		CS	
Type		Size : mm (inch)		Tolerance		Resistance Value		Packing Type	
RC	General purpose chip resistor	1005	1.0×0.5mm (0402)	F	±1%	-3-digit coding System (E-24 series) -4-digit coding System (E-96 series) -Jumper : '000' ex)7320 : 732Ω		CS	7” reel
		1608	1.6×0.8mm (0603)	G	±2%			ES	10” reel
		2012	2.0×1.2mm (0805)	J	±5%			AS	13” reel
		3216	3.2×1.6mm (1206)	* Jumper : 'J'					
		3225	3.2×2.5mm (1210)						
		5025	5.0×2.5mm (2010)						
		6432	6.4×3.2mm (2512)						

■ Structure and Dimensions



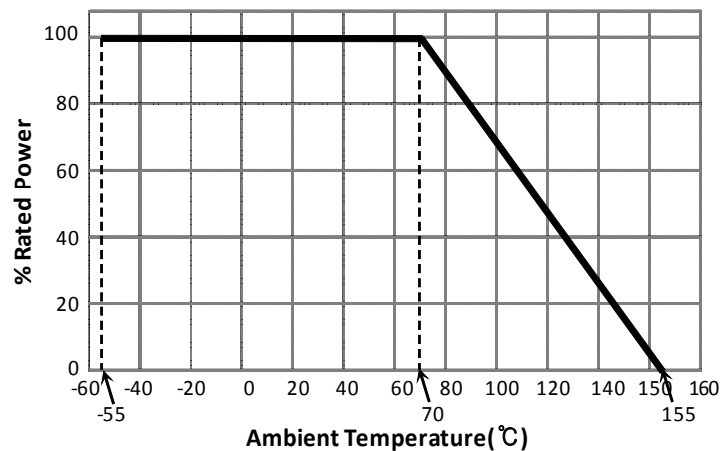
(Unit : mm)

TYPE (Inch)	L	W	T	l_1	l_2	Unit Weight
1005 (0402)	1.00 ± 0.05	0.50 ± 0.05	0.35 ± 0.05	0.20 ± 0.10	0.25 ± 0.10	0.6mg
1608 (0603)	1.60 ± 0.10	0.80 ± 0.10	0.45 ± 0.10	0.30 ± 0.20	0.35 ± 0.10	2.1mg
2012 (0805)	2.00 ± 0.15	1.25 ± 0.15	0.50 ± 0.10	0.40 ± 0.20	0.35 ± 0.20	4.9mg
3216 (1206)	3.20 ± 0.15	1.60 ± 0.15	0.55 ± 0.10	0.45 ± 0.20	0.40 ± 0.20	9.5mg
3225 (1210)	3.20 ± 0.20	2.55 ± 0.20	0.55 ± 0.10	0.45 ± 0.20	0.40 ± 0.20	16mg
5025 (2010)	5.00 ± 0.20	2.50 ± 0.20	0.55 ± 0.10	0.60 ± 0.20	0.60 ± 0.20	26mg
6432 (2512)	6.30 ± 0.20	3.20 ± 0.20	0.55 ± 0.10	0.60 ± 0.20	0.60 ± 0.20	41mg

■ Applications and Ratings

TYPE	Power Rating at 70°C (W)	Max Working Voltage (V)	Max Overload Voltage (W)	Resistance Range (Ω)	T.C.R (ppm/°C)	Working Temperature (°C)
1005 (0402)	1/16	50	100	1 ~ 10M	1~9.9Ω : +300,-200 10Ω ~ 1MΩ : ±100 1.1MΩ~10MΩ : ±300	-55 ~ 155
1608 (0603)	1/10	50	100	1 ~ 10M		-55 ~ 155
2012 (0805)	1/8	150	300	1 ~ 10M		-55 ~ 155
3216 (1206)	1/4	200	400	1 ~ 10M		-55 ~ 155
3225 (1210)	1/3	200	400	1 ~ 10M		-55 ~ 155
5025 (2010)	2/3	200	400	1 ~ 10M		-55 ~ 155
6432 (2512)	1	200	400	1 ~ 10M		-55 ~ 155

■ Power Derating Curve



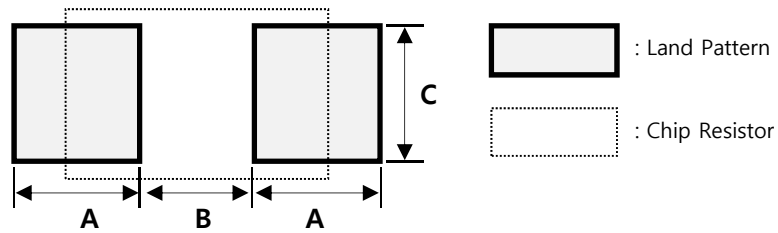
■ Jumper Ratings

Type	Rated Current (A)	Max Overload Current (A)
1005, 1608	1	2
2012, 3216, 3225, 5025, 6432	2	4

■ Rated Voltage

$$E = \sqrt{P \times R}$$
 E : Rated Voltage (V)
 P : Rated Power (W)
 R : Resistance Value (Ω)

■ Recommended land pattern



[Unit : mm]

TYPE (Inch)	Reflow Soldering				Flow Soldering			
Dimension	A	B	2A + B	C	A	B	2A + B	C
1005 (0402)	0.60	0.50	1.70	0.50	0.70	0.50	1.90	0.50
1608 (0603)	0.80	0.80	2.40	0.80	0.90	0.80	2.60	0.80
2012 (0805)	0.90	1.40	3.20	1.20	1.00	1.40	3.40	1.30
3216 (1206)	1.30	1.80	4.40	1.50	1.40	1.80	4.60	1.60
3225 (1210)	1.30	1.80	4.40	2.40	1.40	1.80	4.60	2.60
5025 (2010)	1.40	3.30	6.10	2.40	1.50	3.30	6.30	2.50
6432 (2512)	1.40	4.60	7.40	3.00	1.50	4.60	7.60	3.20

■ Performance Characteristics

ITEM	Requirements Specification	Test Conditions (JIS C 5201-1)
Resistance	Within the specified tolerance	JIS C 5201-1 4.5
Temperature Characteristic	Within the specified T.C.R	JIS C 5201-1 4.8 +20°C → -55°C / +20°C → +125°C
Short time Overload	$\Delta R < \pm 1\% + 0.1\Omega$	JIS C 5201-1 4.13 Rated Voltage×2.5, 5sec
Solderability	Immersed over 95%	JIS C 5201-1 4.17 Rosin Ethanol (25%WT) 245±5/-0°C, 2±0.5 sec
Resistance to Solder Heat	$\Delta R < \pm 1\% + 0.05\Omega$	JIS C 5201-1 4.18 260±5°C, 10±1 sec
Temperature Cycle	$\Delta R < \pm 1\% + 0.1\Omega$	JIS C 5201-1 4.19 -55°C ↔ +155°C, 100 cycle
Moisture Resistance	$\Delta R < \pm 3\% + 0.1\Omega$	JIS C 5201-1 4.24 40±2°C, 90~95%RH, 1,000 ⁺⁴⁸ hours
Load Life	$\Delta R < \pm 3\% + 0.1\Omega$	JIS C 5201-1 4.25 Rated Voltage, 70±2°C, 1,000 ⁺⁴⁸ hours 90mins ON, 30mins OFF
High Temp. Exposure	$\Delta R < \pm 3\% + 0.1\Omega$	JIS C 5201-1 4.25.3 155±2°C, 1,000 ⁺⁴⁸ hours

※ NOTICE :All specifications are subject to change without previous notice. Please contact with product representatives or engineers to check specifications.