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
Type

RC	General purpose chip resistor

1005
Size : mm (inch)

1005	1.0×0.5mm (0402)
1608	1.6×0.8mm (0603)
2012	2.0×1.2mm (0805)
3216	3.2×1.6mm (1206)
3225	3.2×2.5mm (1210)
5025	5.0×2.5mm (2010)
6432	6.4×3.2mm (2512)

F
Tolerance

F	±1%
G	±2%
J	±5%

* Jumper : 'J'

7320
Resistance Value

-3-digit coding System (E-24 series)
-4-digit coding System (E-96 series)
-Jumper : '000'

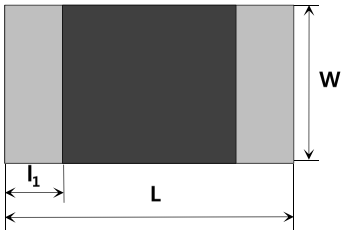
ex)7320 : 732Ω

CS
Packing Type

CS	7" reel
ES	10" reel
AS	13" reel

■ Structure and Dimensions

< Top View >



< Side View >

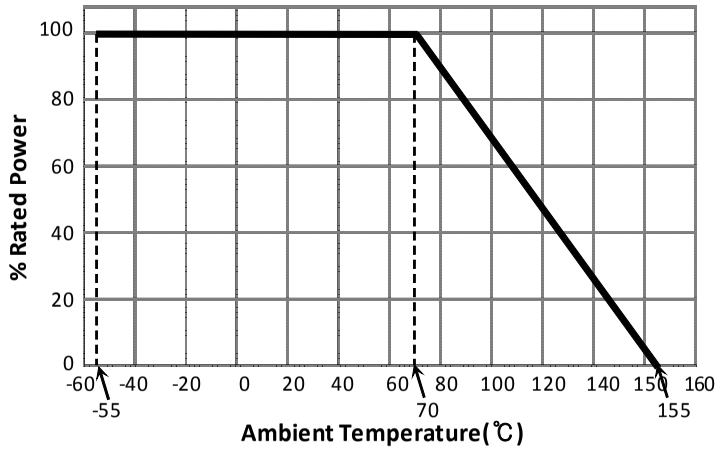
(Unit : mm)

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℃ (W)	Max Working Voltage (V)	Max Overload Voltage (W)	Resistance Range (Ω)	T.C.R (ppm/℃)	Working Temperature (℃)
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

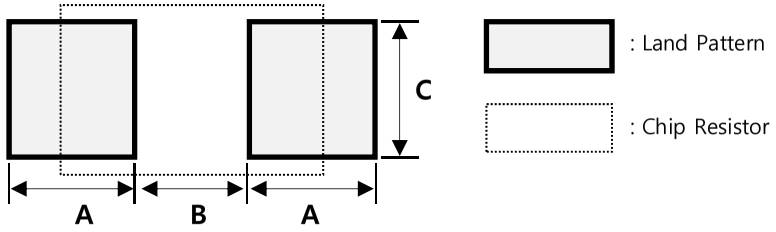
Type	Rated Current (A)	Max Overload Current (A)
1005, 1608	1	2
2012, 3216, 3225, 5025, 6432	2	4

■ Rated Voltage

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

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℃ → -55℃ / +20℃ → +125℃
Short time Overload	ΔR < ±1%+0.1Ω	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℃, 2±0.5 sec
Resistance to Solder Heat	ΔR < ±1%+0.05Ω	JIS C 5201-1 4.18 260±5℃, 10±1 sec
Temperature Cycle	ΔR < ±1%+0.1Ω	JIS C 5201-1 4.19 -55℃ ↔ +155℃, 100 cycle
Moisture Resistance	ΔR < ±3%+0.1Ω	JIS C 5201-1 4.24 40±2℃, 90~95%RH, 1,000^{+48}hours
Load Life	ΔR < ±3%+0.1Ω	JIS C 5201-1 4.25 Rated Voltage, 70±2℃, 1,000^{+48}hours 90mins ON, 30mins OFF
High Temp. Exposure	ΔR < ±3%+0.1Ω	JIS C 5201-1 4.25.3 155±2℃, 1,000^{+48}hours

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