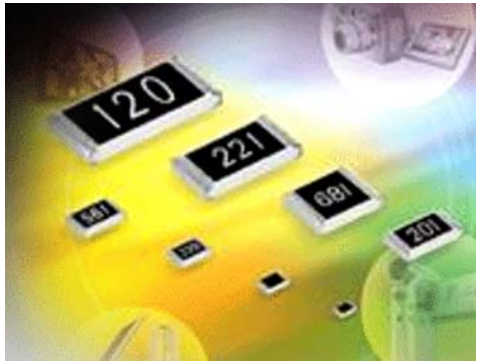
THE DATASHEET OF

RC5025F101CS

Thick Film General Chip Resistors

- 0402(01005), 0603(0201), 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 (Series)

RC	General purpose chip resistor

0603	
Size : mm (inch)	
0402	0.4×0.2mm (01005)
0603	0.6×0.3mm (0201)
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)

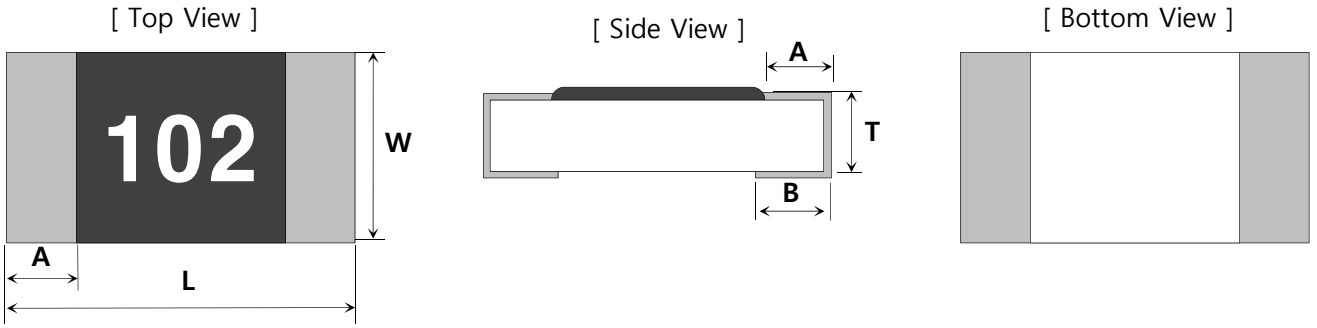
F	
Tolerance	
D	±0.5%
F	±1.0%
G	±2.0%
J	±5.0%

* Jumper : 'J'

2552
Resistance Value
- 3-digit code System (E-24 series) - 4-digit code System (E-96 series) - Jumper : '000' - 2552 : 25.5KΩ

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

■ Structure and Dimensions



[Unit : mm]

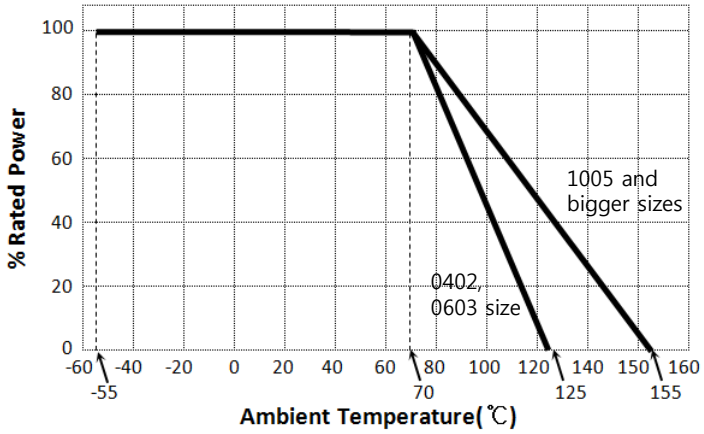
Size(mil)	L	W	T	A	B	Unit Weight
RC0402(01005)	0.40±0.02	0.20±0.02	0.13±0.02	0.10±0.03	0.10±0.03	0.04mg
RC0603(0201)	0.60±0.03	0.30±0.03	0.23±0.03	0.10±0.05	0.15±0.05	0.15mg
RC1005(0402)	1.00±0.05	0.50±0.05	0.35±0.05	0.20±0.10	0.25±0.10	0.6mg
RC1608(0603)	1.60±0.10	0.80±0.10	0.45±0.10	0.30±0.20	0.35±0.10	2.1mg
RC2012(0805)	2.00±0.20	1.25±0.15	0.55±0.10	0.40±0.20	0.35±0.20	4.9mg
RC3216(1206)	3.20±0.20	1.60±0.15	0.55±0.10	0.45±0.20	0.40±0.20	9.5mg
RC3225(1210)	3.20±0.20	2.55±0.20	0.55±0.10	0.45±0.20	0.40±0.20	16mg
RC5025(2010)	5.00±0.20	2.50±0.20	0.55±0.10	0.60±0.20	0.60±0.20	26mg
RC6432(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	Size (mil)	Rated Power [W]	Rated Voltage [V]	Max Working Voltage [V]	Tolerance [%]	Resistance Range [Ω]	T.C.R [ppm/℃]	Working Temp. [℃]	Moisture Level
RC0402	01005	1/32	$\sqrt{P \times R}$ P : Rated Power(W) R : Resistance(Ω)	15	±1(F) ±5(J)	1 ~ 1M	1~9.9Ω : ± 300 10~1MΩ ± 250	-55~125	Level 1
RC0603	0201	1/20		25		1 ~ 10M	1~9.9Ω : ±300 10~10MΩ : ±250		
RC1005	0402	1/16		50	±0.5(D) ±1(F) ±5(J)	1 ~ 10M	1~9.9Ω : ±300 10~10MΩ : ±100	-55 ~ 155	
RC1608	0603	1/10		50					
RC2012	0805	1/8		150					
RC3216	1206	1/4		200					
RC3225	1210	1/3		200					
RC5025	2010	2/3		200					
RC6432	2512	1		200					

• Please contact our sales representatives or engineers for other specifications

■ Power Derating Curve



■ Jumper Ratings

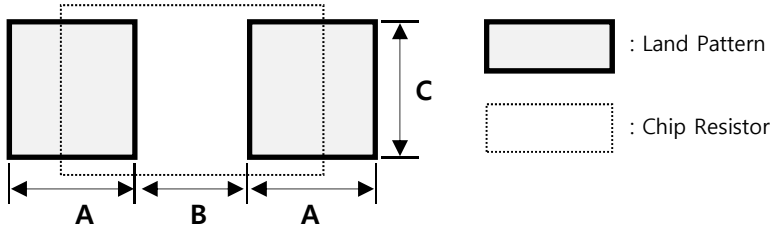
Type	Rated Current [A]	Max Overload Current [A]	Resistance [Ω]	Working Temp.[℃]
0402, 0603	0.5	1	0.05max	-55 ~ 125
1005, 1608	1	2		-55 ~ 155
2012 and bigger sizes	2	4		

■ Rated Voltage

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

E : Rated Voltage (V)
P : Rated Power (W)
R : Resistance Value (Ω)

■ Standard Soldering Pad Dimensions



[Unit : mm]

Size(mil)	Reflow Soldering			
	A	B	2A + B	C
RC0402(01005)	017	0.20	0.54	0.18
RC0603(0201)	0.37	0.28	1.02	0.29
RC1005(0402)	0.60	0.50	1.70	0.50
RC1608(0603)	0.80	0.80	2.40	0.80
RC2012(0805)	0.90	1.40	3.20	1.20
RC3216(1206)	1.30	1.80	4.40	1.50
RC3225(1210)	1.30	1.80	4.40	2.40
RC5025(2010)	1.40	3.30	6.10	2.40
RC6432(2512)	1.40	4.60	7.40	3.00

■ 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%+0.1Ω	JIS C 5201-1 4.18 260±5℃, 10±1 sec
Temperature Cycle	ΔR < ±1%+0.1Ω	JIS C 5201-1 4.19 -55℃ ↔ +125℃, 100 cycle
Moisture Resistance	ΔR < ±3%+0.1Ω	JIS C 5201-1 4.24 40±2℃, 90~95%RH, 1,000^{+48}hours 90mins ON, 30mins OFF
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

※ The reliability test condition can be replaced by the corresponding accelerated test condition.

Product specifications included in the specifications are effective as of March 01, 2015.

Please be advised that they are standard product specifications for reference only.

We may change, modify or discontinue the product specifications without notice at any time.

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