



# 香 港 電 阻 製 造 廠

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## HONG KONG RESISTORS MANUFACTORY

(wholly owned by Hong Kong Resistors Manufactory International Ltd.)

AN ISO 9001:2008 CERTIFIED MANUFACTURER

AN OHSAS 18001:2007 MANUFACTURER

AN ISO 14001 : 2004 MANUFACTURER

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## DATA SHEET

Name of Product : CEMENT TYPE RESISTOR (SOP)

Sales Executive : \_\_\_\_\_

Date: \_\_\_\_\_

製造 Prepared by	檢驗 Inspected by	審核 Audited by	核准 Authorized by
客戶 customer approval	客戶 customer approval	客戶 customer approval	客戶 customer approval

Spec. No. SQP 2015

Rev. No.: 2015 May.(1)

**PRODUCT : CEMENT TYPE RESISTOR**

**TYPE : SQP-1W/2W/3W/5W/7W/10W/15W/20W**

## 1. APPLICABLE SCOPE :

1.1 This specification is for use in CEMENT TYPE RESISTOR

1.2 Characteristics and specifications are according to those of :

MIL-STD-105

MIL-STD-202

JIS C 5202

GB 5731-85

IEC 115-2-1-1982

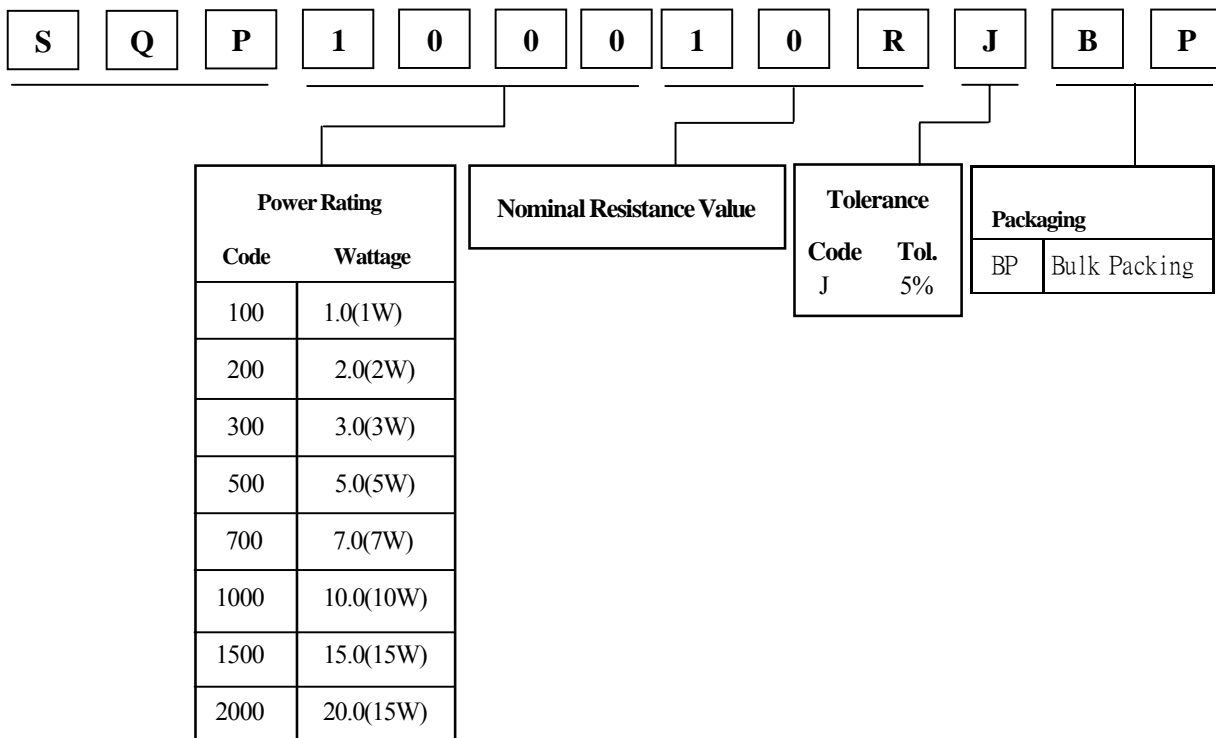
QC 400101

1.3 RoHS and REACH compliant product

## 2. TYPE

It is composed of description , rated wattage , nominal resistance , tolerance and packaging.

2.1 Explanation of part numbers :



2.2 Example of expression :

Part Number

Description

SQP 1000 10R J BP

Cement Type Resistor, 10W, 10 Ω , +/-5% tolerance , bulk pack.

PRODUCT : CEMENT TYPE RESISTOR

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## 3. SPECIFICATIONS

TABLE - 1

DESCRIPTION 內容	WBA100	WBA200	WBA300	WBA500	WBA700	WBA1000	WBA1500	WBA2000
POWER RATING AT 70°C 額定功率(70°C)	1W	2W	3W	5W	7W	10W	15W	20W
OPERATING TEMP RANGE 使用溫度範圍	-40°C~+155°C	-40°C~+155°C	-40°C~+155°C	-40°C~+155°C	-40°C~+155°C	-40°C~+155°C	-40°C~+155°C	-40°C~+155°C
TEMPERATURE COEFFICIENT 溫度特性	±350PPM	±350PPM	±350PPM	±350PPM	±350PPM	±350PPM	±350PPM	±350PPM
INSULATION RESISTANCE 絕緣電阻	MIN. 20 MΩ	MIN. 20 MΩ	MIN. 20 MΩ	MIN. 20 MΩ	MIN. 20 MΩ	MIN. 20 MΩ	MIN. 20 MΩ	MIN. 20 MΩ
HUMIDITY 耐濕負荷壽命	±(5%R+0.05 Ω)	±(5%R+0.05 Ω)	±(5%R+0.05 Ω)	±(5%R+0.05 Ω)	±(5%R+0.05 Ω)	±(5%R+0.05 Ω)	±(5%R+0.05 Ω)	±(5%R+0.05 Ω)
SHORT-TIME OVERLOAD 短時間過負荷	±(2.5%R+0.05 Ω)	±(2.5%R+0.05 Ω)	±(2.5%R+0.05 Ω)	±(2.5%R+0.05 Ω)	±(2.5%R+0.05 Ω)	±(2.5%R+0.05 Ω)	±(2.5%R+0.05 Ω)	±(2.5%R+0.05 Ω)
SOLDERABILITY 焊錫性	MIN.75% COVERED	MIN.75% COVERED	MIN.75% COVERED	MIN.75% COVERED	MIN.75% COVERED	MIN.75% COVERED	MIN.75% COVERED	MIN.75% COVERED
LOAD LIFE 負載壽命	±(5%R+0.1 Ω)	±(5%R+0.1 Ω)	±(5%R+0.1 Ω)	±(5%R+0.1 Ω)	±(5%R+0.1 Ω)	±(5%R+0.1 Ω)	±(5%R+0.1 Ω)	±(5%R+0.1 Ω)
FLAME RETARDANT 不燃性	NO FLAMING	NO FLAMING	NO FLAMING	NO FLAMING	NO FLAMING	NO FLAMING	NO FLAMING	NO FLAMING

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## 4. CHARACTERISTICS :

TABLE - 2

DC RESISTANCE VALUE	TEST METHOD MIL-STD-202 ITEM 303	TEMPERATURE 25°C ± 2°C. AQL 0.25%.
SHORT TIME OVERLOAD	TEST METHOD JIS C 5202 ITEM 5.5	RATED VOLTAGE × 2.5 TIMES OR MAX.WORKINGVOLTAGE × 2 TIMES. ABOVE TEST 5 SEC. THE RESISTANCE VALUE CHANGE RATE SHALL BE WITHIN ±(2.5%R+0.05 Ω).
SOLDERABILITY OF TERMINAL	TEST METHOD MIL-STD-202 ITEM 210	260°C ± 5°C 10 ± 1SEC. AFTER TESTING, LEAVE FOR 3 HOURS. THE RESISTANCE VALUE CHANGE RATE SHALL BE WITHIN ±(1%R+0.05 Ω).
VIBRATION WITHSTAND	TEST METHOD MIL-STD-202 ITEM 204	X, Y, Z-EACH DIRECTION 2 HOURS. AMPLITUDE 0.75MM. RANGE : 10HZ ~ 500HZ. THE RESISTANCE VALUE CHANGE RATE SHALL BE WITHIN ±(1%R+0.05 Ω).
LOAD LIFE	TEST METHOD MIL-STD-202 ITEM 108	70°C ± 2°C. 1000 HOURS RATED VOLTAGE (1.5 HOURS ON, 0.5 HOUR OFF). THE RESISTANCE VALUE CHANGE RATE SHALL BE WITHIN ±(5%R+0.1 Ω).
RESISTANCE TEMPERATURE COEFFICIENT	TEST METHOD MIL-STD-202 ITEM 304	THE RESISTANCE VALUE CHANGE RATE SHALL BE AS TABLE - 3.
LOAD LIFE IN HUMIDITY	TEST METHOD MIL-STD-202 ITEM 103	THE RESISTANCE VALUE CHANGE RATE SHALL BE WITHIN ±(5%R+0.05 Ω).

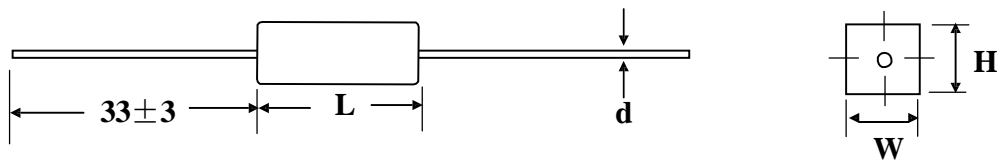
NOTE : RESISTORS SHALL BE EXAMINED FOR EVIDENCE OF NO MECHANICAL DAMAGE,  
ARCING AND BREAKDOWN AFTBER THE TEST.

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## 5. SQP TYPE DIMENSIONS :

TABLE - 3



Unit: mm

TYPE	W $\pm$ 1	H $\pm$ 1	L $\pm$ 2	d $\pm$ 0.05	RESISTANCE VALUE RANGE 阻值範圍	
					WIREWOUND RODS	VALUE CUT RODS
SQP100	6	6	13	0.48	0.1 $\Omega$ - 50 $\Omega$	51 $\Omega$ - 24K $\Omega$
SQP200	7.5	7.5	18	0.48	0.1 $\Omega$ - 50 $\Omega$	51 $\Omega$ - 24K $\Omega$
SQP300	8.5	8.5	22	0.48	0.1 $\Omega$ - 50 $\Omega$	51 $\Omega$ - 33K $\Omega$
SQP500	10	9.5	22	0.75	0.1 $\Omega$ - 50 $\Omega$	51 $\Omega$ - 50K $\Omega$
SQP700	10	9	35	0.75	0.1 $\Omega$ - 50 $\Omega$	51 $\Omega$ - 50K $\Omega$
SQP1000	10	9	48	0.75	0.1 $\Omega$ - 50 $\Omega$	51 $\Omega$ - 50K $\Omega$
SQP1500	12	13	48	0.75	1 $\Omega$ - 200 $\Omega$	201 $\Omega$ - 150K $\Omega$
SQP2000	14	13	60	0.75	1 $\Omega$ - 200 $\Omega$	201 $\Omega$ - 150K $\Omega$