

# 香港電阻製造廠

香港柴灣安業街十二號長益工業大廈10字樓A座

## HONG KONG RESISTORS MANUFACTORY

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

AN ISO 9001:2015 CERTIFIED MANUFACTURER

AN ISO 45001: 2018 MANUFACTURER

AN ISO 14001: 2015 MANUFACTURER

10A Cheong Yick Industrial Building, 12 On Yip St., Chai Wan, Hong Kong

Tel.: (852)28962782

Fax.: (852) 28965291

國內工廠一：東莞溢輝電子有限公司

地址：廣東省東莞市大嶺山鎮大嶺山大道396號4棟801室

Tel.: (86 769)83315373

Fax.: (86 769) 83311603

國內工廠二：恒輝電阻(益陽)有限公司

地址：湖南省益陽市資陽區長春工業園五福路

Tel.: (86 737)3800399

Fax.: (86 737) 3800199

國內工廠三：南充溢輝電子科技有限公司

地址：四川省南充市高坪區青蓮街道金輝路8號

Tel.: (86 817) 3315 388

Fax.: (86 817)3315 388

## DATASHEET

Name of Product: CEMENT TYPE RESISTOR (SQP)

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

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

製造 Prepared by	品質 Quality by	業務 Sales by	核准 Authorized by
			
客戶 customer approval	客戶 customer approval	客戶 customer approval	客戶 customer approval

Spec. No. SQP 2023

Rev. No.: 2023 Aug

**PRODUCT : CEMENT TYPE RESISTOR**

**TYPE : SQP-1W/2W/3W/5W/7W/10W/15W/20W/25W**

## 1. APPLICABLE SCOPE:

This specification is for use in CEMENT TYPE RESISTOR

Characteristics and specifications are according to those of :

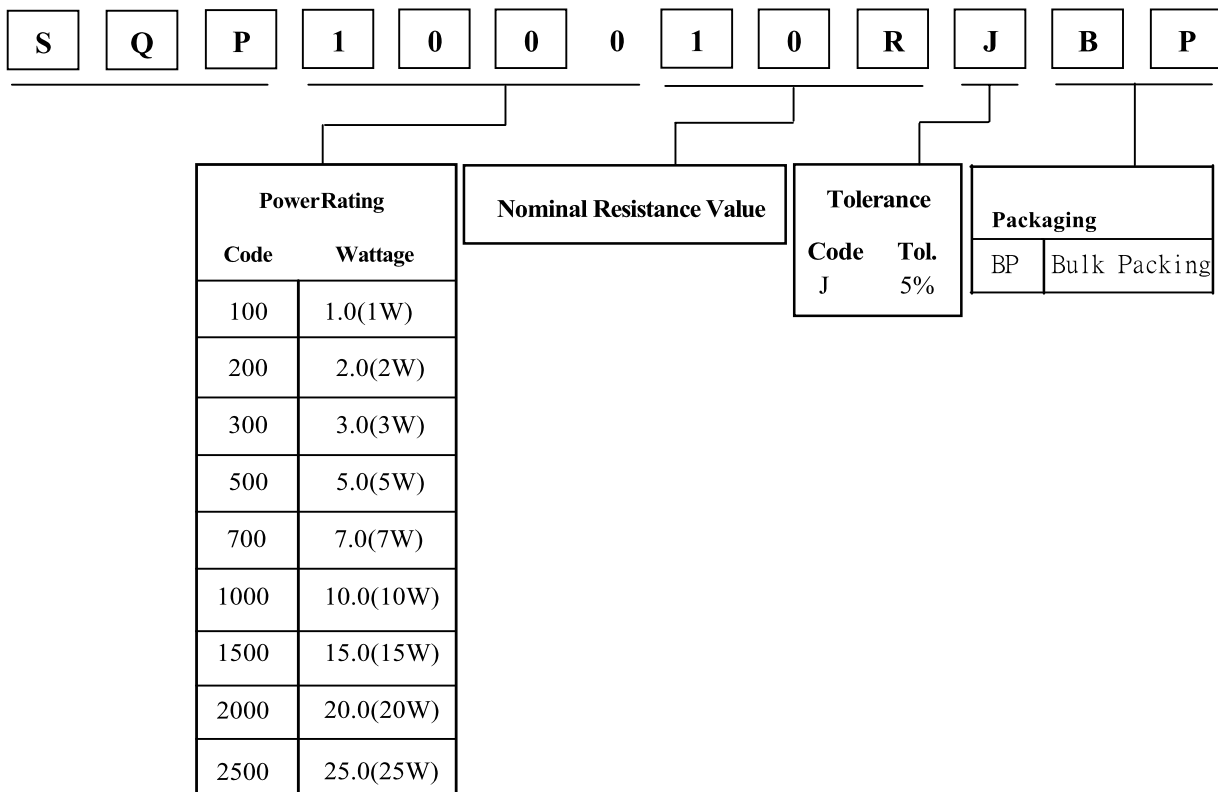
JIS C 5201

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 内容	SQP100	SQP200	SQP300	SQP500	SQP700	SQP1000	SQP1500	SQP2000	SQP2500
POWER RATING AT 70°C 额定功率(70°C)	1W	2W	3W	5W	7W	10W	15W	20W	25W
OPERATING TEMP. RANGE 使用温度范围	-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	-40°C~+155°C
TEMPERATURE COEFFICIENT 温度特性	±350PPM	±350PPM	±350PPM	±350PPM	±350PPM	±350PPM	±350PPM	±350PPM	±350PPM
INSULATION RESISTANCE 绝缘电阻	MIN. 20 MΩ	MIN. 20 MΩ	MIN. 20 MΩ	MIN. 20 MΩ	MIN. 20 MΩ	MIN. 20 MΩ	MIN. 20 MΩ	MIN. 20 MΩ	MIN. 20 MΩ
HUMIDITY 耐湿负荷寿命	±(5%R+0.05Ω)	±(5%R+0.05Ω)	±(5%R+0.05Ω)	±(5%R+0.05Ω)	±(5%R+0.05Ω)	±(5%R+0.05Ω)	±(5%R+0.05Ω)	±(5%R+0.05Ω)	±(5%R+0.05Ω)
SHORT- TIME OVERLOAD 短时间过负荷	±(2.5%R+0.05Ω)	±(2.5%R+0.05Ω)	±(2.5%R+0.05Ω)	±(2.5%R+0.05Ω)	±(2.5%R+0.05Ω)	±(2.5%R+0.05Ω)	±(2.5%R+0.05Ω)	±(2.5%R+0.05Ω)	±(2.5%R+0.05Ω)
SOLDERABILITY 焊锡性	MIN. 95% COVERED	MIN. 95% COVERED	MIN. 95% COVERED	MIN. 95% COVERED	MIN. 95% COVERED	MIN. 95% COVERED	MIN. 95% COVERED	MIN. 95% COVERED	MIN. 95% COVERED
LOAD LIFE 负载寿命	±(5%R+0.1Ω)	±(5%R+0.1Ω)	±(5%R+0.1Ω)	±(5%R+0.1Ω)	±(5%R+0.1Ω)	±(5%R+0.1Ω)	±(5%R+0.1Ω)	±(5%R+0.1Ω)	±(5%R+0.1Ω)
FLAME RETARDANT 不燃性	NO FLAMING	NO FLAMING	NO FLAMING	NO FLAMING	NO FLAMING	NO FLAMING	NO FLAMING	NO FLAMING	NO FLAMING

**PRODUCT : CEMENT TYPE RESISTOR**
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## 4. CHARACTERISTICS :

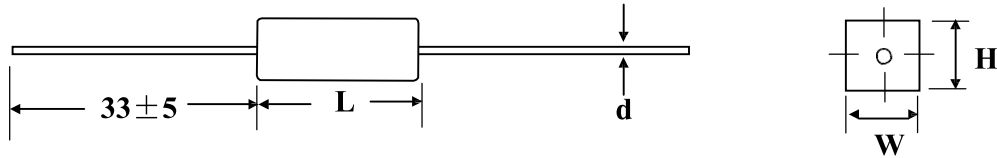
TABLE - 2

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 5201 ITEM 5.5	RATED VOLTAGE × 2.5 TIMES OR MAX. WORKING VOLTAGE × 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 ± 1 SEC. AFTER TESTING, LEAVE FOR 3 HOURS. THE RESISTANCE VALUE CHANGE RATE SHALL BE WITHIN ± (1%R + 0.05 Ω).
VIBRATION WITH STAND	TEST METHOD MIL-STD-202 ITEM 204	X, Y, Z - EACH DIRECTION 2 HOURS. AMPLITUDE 0.75 MM. RANGE : 10 HZ ~ 500 HZ. 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 HOUR 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 AFTER THE TEST.

**PRODUCT : CEMENT TYPE RESISTOR**
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**5. SQPTYPE DIMENSIONS:**

TABLE - 3



Unit : mm

TYPE	$W \pm 2$	$H \pm 2$	$L \pm 2$	$d \pm 0.05$	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 $\Omega$ - 100 $\Omega$	101 $\Omega$ - 51K $\Omega$
SQP300	8.5	8.5	22	0.48	0.1 $\Omega$ - 200 $\Omega$	201 $\Omega$ - 51K $\Omega$
SQP500	10	9.5	22	0.75	0.1 $\Omega$ - 200 $\Omega$	201 $\Omega$ - 51K $\Omega$
SQP700	10	9	35	0.75	0.1 $\Omega$ - 500 $\Omega$	501 $\Omega$ - 51K $\Omega$
SQP1000	10	9	48	0.75	0.1 $\Omega$ - 500 $\Omega$	501 $\Omega$ - 150K $\Omega$
SQP1500	12	13	48	0.75	1 $\Omega$ - 820 $\Omega$	821 $\Omega$ - 150K $\Omega$
SQP2000	14	13	60	0.75	1 $\Omega$ - 1K $\Omega$	1.01K $\Omega$ - 150K $\Omega$
SQP2500	13	13	60	0.75	1 $\Omega$ - 1K $\Omega$	1.01K $\Omega$ - 150K $\Omega$