

SQ(P)□W:

水泥型電阻器(線繞)

CEMENT TYPE RESISTORS (WIREWOUND)

SQ(P)□M:

水泥型電阻器(金屬氧化膜)

CEMENT TYPE RESISTORS (METAL OXIDE FILM)

SQ(P)□G:

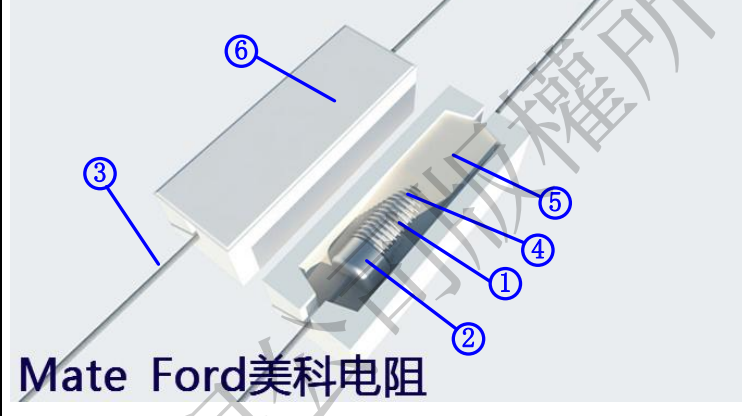
水泥型電阻器(玻璃纖維)

CEMENT TYPE RESISTORS (GLASS CORE)

■構造圖 Construction



Mate Ford 美科電阻



Mate Ford美科电阻

①	白瓷棒 Ceramic core	④	電阻材料 Resistant material
②	電鍍帽 End cap	⑤	水泥樹脂 Cement Resin
③	導線 Lead wire	⑥	瓷殼 Ceramic case

■特性 Feature

- 大功率型電阻器
 - 陶瓷殼阻燃性/ 絕緣性電阻器
 - 衝擊耐受電壓防止突入電流性能優異
 - 端子無鉛品，符合歐盟 RoHS。
- High-power resistor.
 - Using frame-retardant/insulated ceramic case.
 - Excellent in anti-pulse and inrush current.
 - Products meet EU-RoHS requirements.

■參考標準 Reference Standards

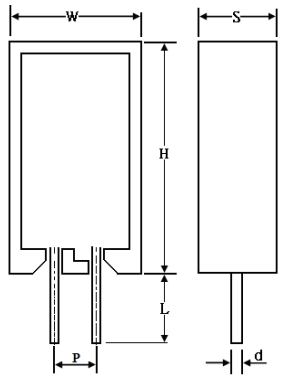
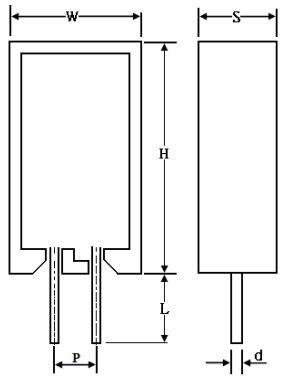
IEC 60115
JIS C 5201
GB/T 5729

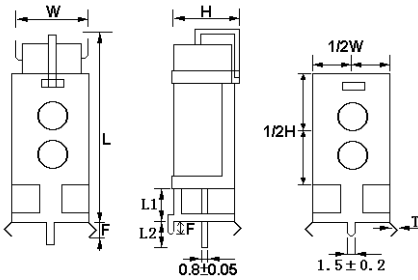
■品名構成 Type Designation (實例 Example)

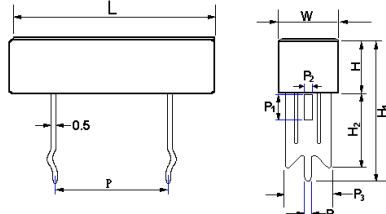
SQPW	5W-	J-	100-	B40X40-	U075/A07/A08
型號 Product Code	額定功耗代碼 Power Rating	阻值允許偏差(%) Resistance Tolerance	標稱阻值(Ω) Nominal Resistance	包裝方式 Taping & Forming	引線線材材質線徑 Lead wires of material. Wire size
SQP□ SQM□ SQZ□ SQH□ SPS□	1W:1W 2W:2W 3W:3W 5W:5W 7W:7W 10W:10W 15W:15W 20W:20W 30W:30W 40W:40W 50W:50W 100W:100W	F:±1% G:±2% J:±5%	G:4 digits EX 10.2Ω=10R2 10KΩ=1002 J:3 digits EX 10KΩ=103 100Ω=100	M成形: M Forming B成形: B Forming B40X40 表示兩端引線長度 It indicates the length of the lead ends	U:鍍錫銅線 Tinned wire L:裸銅包鋼線 Nude steely wire covered copper G:鍍錫銅包鋼線 Steely wire covered copper T:鐵線 Iron wire D:電鍍線 Electroplating wire A07:端子 Terminals A08:固定架 Holder

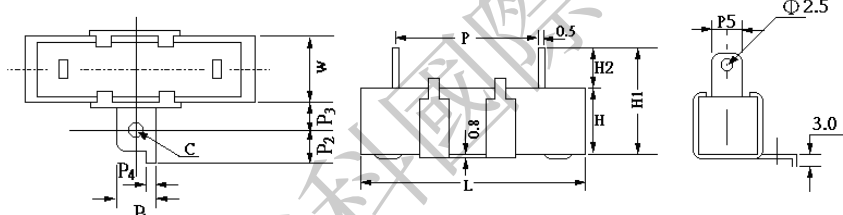
■品名・構造・尺寸 Type・Designation・Dimensions

種類 Style	型號 Type	尺寸 Dimensions(mm)				
		L	W±1.0	H±1.0	d±0.05	ℓ±3
SQP□	SQP□-1W	14.0±1.0	6.0	6.0	0.65	23
	SQP□-2W	18.0±1.0	6.5	7.0	0.75	32
	SQP□-3W	22.0±1.0	8.5	8.5		30
	SQP□-5W	22.0±1.0	10.0	9.5		30
	SQP□-7W	35.0±1.5	10.0	9.5		35
	SQP□-10W	48.0±2.0	10.0	9.5		33
	SQP□-15W	48.0±2.0	12.5	11.5		35
	SQP□-20W	60.0±2.0	14.5	13.5		35
	SQP□-30W	75.0±2.0	20	19		35
	SQP□-40W	75.0±2.0	20	19		35
	SQP□-50W	90.0±2.0	20	19		35
	SQP□-5WS	22.0±1.0	8.5	8.5		30
	SQP□-7WS	22.0±1.0	10.0	9.5		30
	SQP□-10WS	22.0±1.0	13.0	13.0		35
	ℓ L ℓ dΦ ↑ W H					

種類 Style	型號 Type	尺寸 Dimensions(㎜)						
		W±1.0	S±1.0	H±1.5	P+2/-1	d±0.05	L±1.5	
SQM□	SQM□-1W	12.0±0.5	5.0±0.5	14.5±0.5	5.0±0.5	0.65	3~11	
	SQM□-2W	11.5	7.5	21.0	4	0.75	3~13	
	SQM□-3W	12.5	8.5	25.0	5			
	SQM□-5W	13.0	9.0	25.0	5			
	SQM□-7W	13.0	9.5	39.0	5			
	SQM□-10W	13.0	9.5	51.0	5			
	SQM□-5WS	11.5	7.5	21.0	4			
	SQM□-7WS	13.0	9.0	25.0	5			
	SQM□-10WS	16.0	12.0	35.0	7.5			
	SQM□-15WS	13.0	9.50	50.0	5			

種類 Style	型號 Type	尺寸 Dimensions(mm)						
		L±2	H±1	W±1	L1±1	L2±1	F±1	T±0.1
SPS□	SPS□-7W	45	11	11	9.5	6.0	4.0	0.5
	SPS□-10W	58	11	11	9.5	6.0	4.0	0.5
	SPS□-15W	58	15	15	9.5	6.0	4.0	0.5
	SPS□-20W	70	15	15	9.5	6.0	4.0	0.5
								

種類 Style	型號 Type	尺寸 Dimensions(mm)									
		L±2	H±1	W±1	P±2	H ₁ ±2	H ₂ ±1	P ₁ ±0.3	P ₂ ±0.3	P ₃ ±0.3	P ₄ ±0.3
SQZ□	SQZ□-5W	28.0	9.5	9.5	15.0	24.0	9.5	4.0	2.0	7.0	1.4
	SQZ□-7W	35.0	9.5	9.5	22.5	24.0	9.5	4.0	2.0	7.0	1.4
	SQZ□-10W	48.0	9.5	9.5	30.0	24.0	9.5	4.0	2.0	7.0	1.4
	SQZ□-15W	48.0	12.5	12.5	32.5	32.5	15.0	7.0	3.8	10.0	3.0
	SQZ□-20W	62.0	12.5	12.5	42.5	32.5	15.0	7.5	3.8	10.0	3.0
	SQZ□-30W	75.0	19.5	19.0	55.0	39.0	15.0	7.5	3.8	10.0	3.0
	SQZ□-50W	90.0	19.5	19.0	71.0	39.0	15.0	7.5	3.8	10.0	3.0
	SQZ□-100W	134.0	23.0	23.5	100.0	38.5	10.0	7.5	3.8	10.0	3.0
		 有特殊端子規格、H1 尺寸不同需求時,請與敝司營業部洽商。 There are special terminal specifications, when H1 different size requirements, please negotiate with the spacious Division Sales Department.									

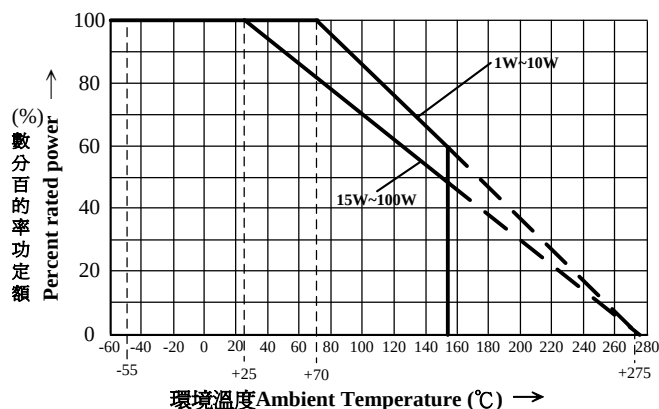
種類 Style	型號 Type	尺寸 Dimensions(mm)											
		L±2	H±1	W±1	P±2	H ₁ ±2	H ₂ ±1	P ₁ ±0.3	P ₂ ±0.3	P ₃ ±0.3	P ₄ ±0.3	P ₅ ±0.3	C±0.3
SQH□	SQH□-10W	48.0	10.0	10.0	30.0	16.5	9.5	12.0	6.0	5.8	2.5	5	3.8
	SQH□-15W	48.0	12.5	12.5	32.5	20.5	8.5	12.0	6.0	6.5	3.0	6	3.8
	SQH□-20W	63.5	12.5	12.5	42.5	20.5	8.5	12.0	8.0	8.5	3.0	6	3.8
	SQH□-30W	75.0	19.0	19.5	55.0	30.0	9.0	18.0	8.0	10.0	3.0	6	4.2
	SQH□-40W	90.0	19.0	19.5	71.0	30.0	9.0	18.0	8.0	10.0	3.0	6	4.2
	SQH□-50W	90.0	19.0	19.5	71.0	30.0	9.0	18.0	8.0	10.0	3.0	6	4.2
		 有特殊端子規格、H1 尺寸不同需求時,請與敝司營業部洽商。 There are special terminal specifications, when H1 different size requirements, please negotiate with the spacious Division Sales Department.											

規格 Rating

品名-額定功耗 Style- Power Rating	最高使用電壓 Max. Working voltage	最高過負荷電壓 Max. Overload voltage	耐電壓 Dielectric Withstanding voltage	電阻溫度係數 T.C.R (ppm/°C)	阻值範圍 Resistance Range (Ω)		額定周圍溫度 Rated Ambient Temp.	使用溫度範圍 Operating Temp. Range
					線繞 W-W	皮膜 Film		
					F: ±1% G: ±2% J: ±5%	G: ±2% J: ±5%		
SQ□□-1W	250V	500 V	1000V	±350	0R02-100R	101R~47K	+70°C	-55°C ~ +155°C
SQ□□-2W	250 V	500 V			0R01-200R	201R~68K	+70°C	
SQ□□-3W	300 V	600 V			0R02-300R	301R~100K	+70°C	
SQ□□-5W	350 V	700 V			0R02-300R	301R~100K	+70°C	
SQ(P)□□-7W	500 V	1000 V			0R1~400R	401R~68K	+70°C	
SQ(P)□□-10W	700 V	1400 V			0R1~500R	501R~100K	+70°C	
SQ(P)□□-15W	700 V	1400 V			0R1~500R	501R~100K	+25°C	
SQ(P)□□-20W	750 V	1500 V			0R51~800R	801R~100K	+25°C	
SQ□□-30W	750 V	1500 V			0R51~1K	1K01~100K	+25°C	
SQ□□-40W	750 V	1500 V			0R51~1K	1K01~100K	+25°C	
SQ□□-50W	750 V	1500 V			0R51~1K	1K01~100K	+25°C	

- 有特殊需求“玻璃纖維”的產品時,請與敝司營業部洽商。The special needs of "Glass fiber" products, please contact our sales department to negotiate.
- 如果繞線電阻阻值或材質、尺寸有特殊要求時,請與敝司營業部洽商。If resistance, size or material of wire wound resistors has special requires, please contact with our Sales Department.

降功率曲線 DERATING CURVE



性能 Performance

試驗項目 Test Characteristics	試驗方法:IEC 60115-1:2001(JIS C 5201-1:1998) 、(GB/T 5729-2003) Test Methods: IEC 60115-1:2001(JIS C 5201-1:1998) 、(GB/T 5729-2003)	性能要求 Performance Requirement
阻值 Resistance	測量點為距本體 10 mm±1 mm Measuring Points are 10 mm±1 mm from the end cap.	規定的允許偏差 Within regulated tolerance
電阻溫度係數 T.C.R	室溫/室溫+100℃ Room temperature/ Room temperature plus 100℃	≤±350ppm/℃
短時間過負荷 Short time overload	2.5 倍額定電壓值或最高過負荷電壓,取兩者之小值, 負荷時間 5 秒 Rated voltage 2.5 or Max. Overload vol. For 5s, whichever less	±(1%R+0.05Ω)
焊接耐熱性 Resistance to Soldering heat	350℃±10℃, 3.5s±0.5s	≤±(1%R+0.05Ω)
可焊性 Solderability	265℃±5℃, 5s±0.5s.	95%以上被新的焊接覆蓋 95% Coverage min.
耐久性(耐濕負荷) Moisture resistance	40℃±2℃, 90%~95%RH, 21 天 1.5 小時 ON/0.5 小時 OFF/ 循環 1.5H ON/0.5H OFF / cycle , 21day	W-W: ≤±(3%R+0.1Ω) MO: ≤±(5%R+0.1Ω)
室溫耐久性 Load life (in Room temperature)	15℃ ~ 35℃, 1000h/with 100% of power rating 1.5 小時 ON/0.5 小時 OFF/循環 1.5 h ON/0.5 h OFF/ cycle	W-W: ≤±(3%R+0.1Ω) MO: ≤±(5%R+0.1Ω)

標誌 Marking

字母數位元標記法 Alpha Numeric

Mate Ford	5W-	10R-	J
公司標誌	額定功耗 Power Rating(W)	標稱阻值(Ω) Nominal Resistance	阻值允許偏差(%) Resistance Tolerance
Mate Ford	5W:5W	10R	J:±5%

使用注意事項 Precautions for Use

✧ 使用交流電路時，由於繞線構造，電路會產生電感成分和寄生容量，有可能發生振動等異常情況。在使用時請仔細考慮其他元件常數的離散情況。In case of using them for an AC circuit, abnormal phenomena like oscillation etc. occasionally happen as they have an inductance or a parasitic capacitance because of their wiring structures. Use them by taking the dispersion of constants of other components into the consideration.