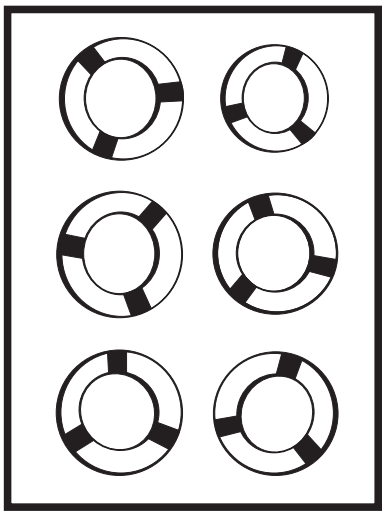
■鈦酸鍶環形壓敏電阻器
STRONTIUM TITANATE RING VARISTOR

• 特性 FEATURES



＊ 本元件由鈦酸鍶燒制而成。	Conductor ceramic is made of titanium oxide and strontium.
＊ 用于低壓範圍E_{10}=1.5～60V。	Used in the range of low voltage E_{10}=1.5～60V.
＊ 具有大電容量，可在甚寬的頻率範圍内吸收噪音。	Wide capacitance ,absorb the noise in a wide frequency range.
＊ 具有較大的電壓非綫性系數，吸收浪涌能力强，而且具有高可靠性自復原能力。	Excellent non-linearity voltage; High capability to absorb surge and high reliability to recover itself.
＊ 具有壓敏和電容復合功能，對前沿短的脉衝具有良好的吸收效果。	With the function both of capacitor and varistor. It can absorb forward short pulse.
＊ 壓敏電壓E_{10}温度系數小。	Small temperature coefficient of voltage E_{10}.
＊ 耐焊接性好，焊接后E_{10}變化率小。伏安特性無方向性。	Excellent soldering-resistance, small E_{10} changing after soldering.

• 用途 APPLICATIONS

用于微型直流馬達的火花消除和噪音吸收。	Eliminates sparks between governor contact and commuters and brashes, absorb noise in small Motors

• 訂貨方式 HOW TO ORDER

F (1) S (2) R (3) III (4) A (5) 050 (6) 080 (7)

(1)

公司Company	
F	安伏特Ampfort

(2)

材料Material	
S	SrTiO3 鈦酸鍶

(3)

電極位置Electrode posction	
S	側面Side
R	正面Surface

(4)

電極數Number of Electrode	
Ⅲ	三極 3 Poles
V	五極 5 Poles

(5)

外形尺寸φD(mm) Extermal Dimensions		
	外徑φD(mm)	内徑φD(mm)
A	10.7	6.7
B	9.4	5.7
C	8.6	5.7

(6)

下限電壓E_{10}(V) Lower Limit Voltage	
例Ex	記號×0.1
050	5.0

(7)

上限電壓E_{10}(V) Upper Limit Voltage	
例Ex	記號×0.1
080	8.0

鈦酸鍶環形壓敏電阻器
STRONTIUM TITANATE RING VARISTOR

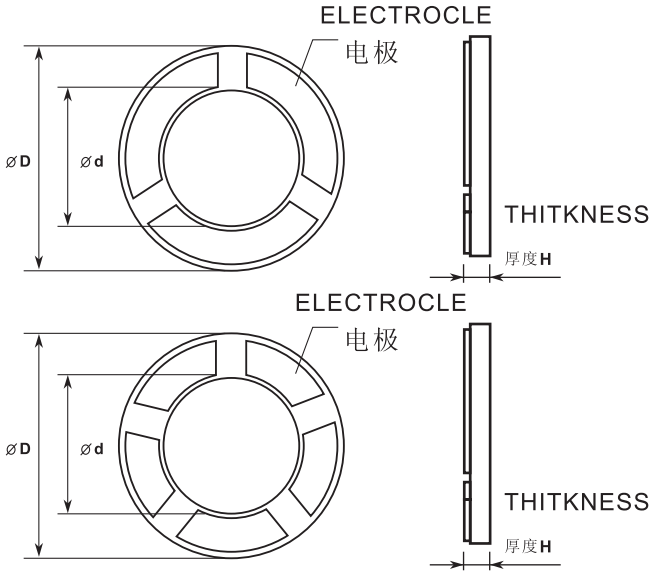


圖1 鈦酸鍶環形壓敏電阻器正面電極產品外形圖
STR CERAMIC RING VARISTOR OF SURFACE ELECTRODE TYPE

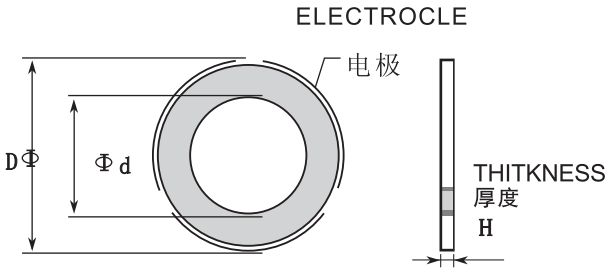


圖2 鈦酸鍶環形壓敏電阻器側面電極產品外形圖
STR CERAMIC RING VARISTOR OF SIDE ELECTRODE TYPE

- 外形尺寸 EXTRNAL DIMENSIONS

單位(Unit):mm

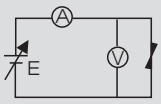
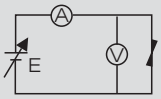
尺寸代碼 The size of code	外徑 ΦD	内徑 Φd	厚度 H
A	10.7±0.2	6.7±0.2	≤1.05
B	9.4±0.3	5.8±0.2	≤1.05
C	8.6±0.2	5.7±0.2	≤0.85
D	8.0±0.2	5.0±0.2	≤0.8
E	7.8±0.2	5.3±0.2	≤0.7
F	6.6±0.2	3.7±0.2	≤0.9
G	6.0±0.2	3.7±0.2	≤0.8
H	3.7±0.2	2.5±0.2	≤0.65
J	3.0±0.2	2.0±0.2	≤0.5
K	4.2±0.2	2.8±0.2	≤0.65
M	6.6±0.2	4.7±0.2	≤0.75
N	2.4±0.15	1.8±0.15	≤0.5
S	8.6±0.2	5.0±0.2	≤0.8
T	11.7±0.3	7.4±0.4	≤1.2
V	10.7±0.2	7.0±0.2	≤1.05
W	12.7±0.2	9.5±0.2	≤1.0
Y	14.0±0.3	7.5±0.2	≤1.3
Z	16.0±0.4	9.4±0.3	≤1.3

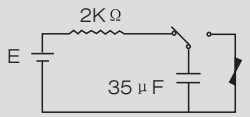
※ 若顧客在外形尺寸上有特殊要求，我們可根據顧客的圖紙設計生產。
Mark indicates non-standard code for customers design requirements.

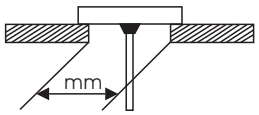
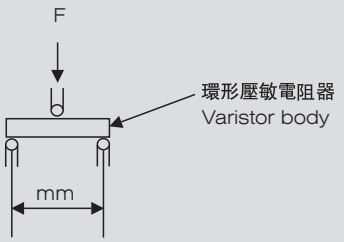
• 規格型號一覽（ A型） PART NUMBERS (TYPE A)

規格型號 Type	測試電流 Measuring current(mA)	10毫安壓敏電壓 E_{10} Voltage(V)	靜態電容量 Capacitace 1KHZ (nf)	電極數 Number of Electrode
FSRⅢA020045	10	2.0~4.5	5 min.	3
FSRⅢA040066	10	4.0~6.6	5 min.	3
FSRⅢA050080	10	5.0~8.0	5 min.	3
FSRⅢA060090	10	6.0~9.0	5 min.	3
FSRⅢA080120	10	8.0~12.0	5 min.	3
FSRⅢA090140	10	9.0~14.0	5 min.	3
FSRⅢA100150	10	10.0~15.0	5 min.	3
FSRⅢA130180	10	13.0~18.0	5 min.	3
FSRⅢA170300	10	17.0~30.0	5 min.	3

• 技術性能 PERFORMANCE PARAMETER

項目 Item	性能指標 Specified Value	測試方法及摘要 Test Methods and Remaks
1、使用環境温度 Operating Temperature range	-25℃~+120℃ 50℃~120℃時參考降負荷曲綫 For the range 50 to120℃. refer to the derating curve	
2、存放環境温度 Storage Temperature range	5℃~+35℃	
3、額定功率 Rated Power	因産品規格而异 Refer to individual specification	
4、E_{10}特性 E_{10}Characteristic	因産品規格而异 Refer to individual specification	(在25±5℃)  E：恒流電源 Constant-current source A：數字電流計 Digital ammeter V：數字電壓計 Digital Voltmeter
5、靜電容量 Capacitance	因産品規格而异 Refer to individual specification	測試頻率Measuring frequency:1KHZ±10% 測試電壓Measuring voltage::1.0±0.5Vrms 測試温度Measuring Temperature:25±5℃
6、非綫性系數 Non-linear Coefficient α(at25±5℃)	因産品規格而异 Refer to individual specification $\alpha = \frac{1}{LgE_{10}/E1}$ E_1:通1mADC直流電時的壓敏電壓 Voltage at referece current with application of 1mADC E_{10}:通10mADC直流電時的壓敏電壓 Voltage at referece current with application of 10mADC	 E：恒流電源 Constant-current source A：數字電流計 Digital ammeter V：數字電壓計 Digital Voltmeter

項目 Item	性能指標 Specified Value	測試方法及摘要 Test Methods and Remaks
7、温度特性 Temperture characteristic	±0.4%/℃	分別在25℃、50℃測出E10的壓敏電壓計算出來。 Measurement of vottage at reference at 25℃ and 50℃ shall made for the calculation by the following formula: $\frac{E_{10}(50℃)-E_{10}(25℃)}{E_{10}(25℃)} \times \frac{100}{(50℃-25℃)}(\%/℃)$
8、耐脉衝 Pulse resistance	變化率小于：10% Change rate$E_{10} \leqslant 10\%$	 在上圖所示電路中，壓敏電阻在20秒内承受10次衝擊，然后測其壓敏特性。 Varistors shall be subjected to 10 times discharge form a capacitor shown in the above circuit with an interval of 20 seconds, and then measured varistor voltage.
9、耐濕性 Moisture resistance	變化率小于10% Change rate$E_{10} \leqslant 10\%$	壓敏電阻在60±2℃，90~95%RH時，經240±8小時耐濕性測試，然后在空氣中放置1~2小時后測試。 Varistors shall be subjected to humidity test for 240±8 hrs. at 60±2℃ and 90 to 95%RH.After removal from the temperature oven. Varistor shall be placed at for 1 to 2 hrs, and then measured.
10、耐熱性 Heat resistance	變化率小于10% Change rate$E_{10} \leqslant 10\%$	在設定温度125±5℃，持續時間240±8小時后，取出放置1~2小時后測試。 Ambient125±5℃,Duration 240±8 hrs. Measurement shall be made after 1 to 2 hrs, after removal.

<table>
<tr><th>項目
Item</th><th>性能指標
Specified Value</th><th>測試方法及摘要
Test Methods and Remaks</th></tr>
<tr><td>11、耐寒性
Cold resistance</td><td>變化率小于10%
Change rate$E_{10} \leqslant 10\%$</td><td>在設定温度-30±3℃，持續時間240±8小時后，取出放置1～2小時后测試。
Ambient -30±3℃,Duration 240±8 hrs. Measurement shall be made after 1 to 2 hrs, after removal.</td></tr>
<tr><td>12、耐焊性
Soldering</td><td>變化率小于10%
Change rate$E_{10} \leqslant 10\%$</td><td>在350℃±10℃用含錫量60%的焊錫焊接0.5秒，放置1～2小時后测量。
<table><tr><td>Tool</td><td>Soldering iron</td></tr><tr><td>Soldering material</td><td>Solf solder stick (sn:60%) (containing flux)</td></tr><tr><td>Temp(℃)</td><td>350℃±10℃</td></tr><tr><td>Touching time(sec.)</td><td>0.5 s</td></tr></table>Measurement shall be made after 1 to 2 hrs, after removal.</td></tr>
<tr><td>13、電極抗拉性
Tensile strength electrode</td><td>因産品規格而异
Refer to individual specification</td><td> 
Lead wire
F(kg)
<table><tr><td>引綫Lead wire(mm)</td><td>視産品大小而异</td></tr><tr><td>負荷Load (kg)</td><td>視産品大小而异</td></tr><tr><td>受力方向
Direction</td><td>反向
Vertical
(Eleclrorde
VS lead)</td></tr></table></td></tr>
<tr><td>14、抗折性
Bending strength of body</td><td>因産品規格而异
Refer to individual specification</td><td>  </td></tr>
</table>