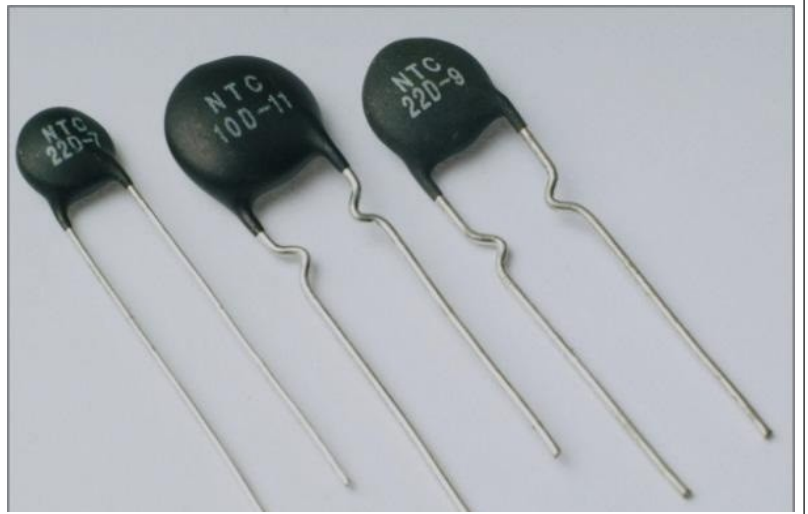


KSE-MF72 - radial lead wire
resin coated NTC thermistor
series

Applied for suppressing surge
current

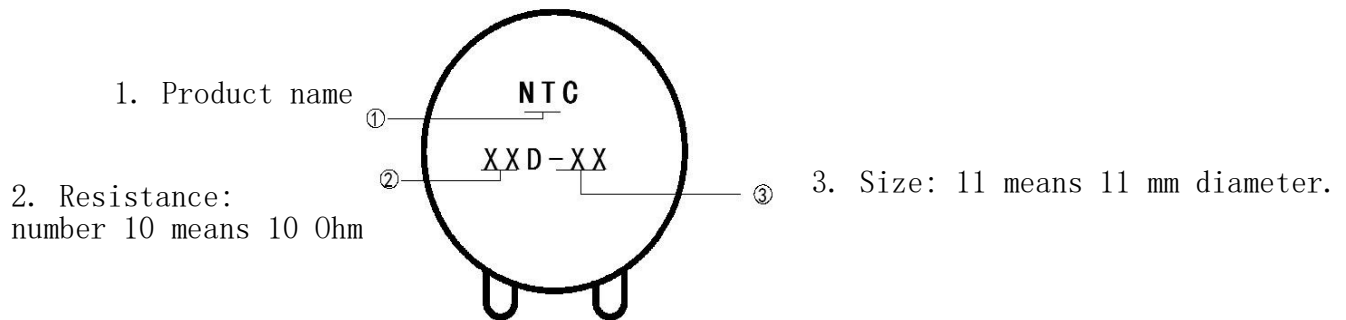
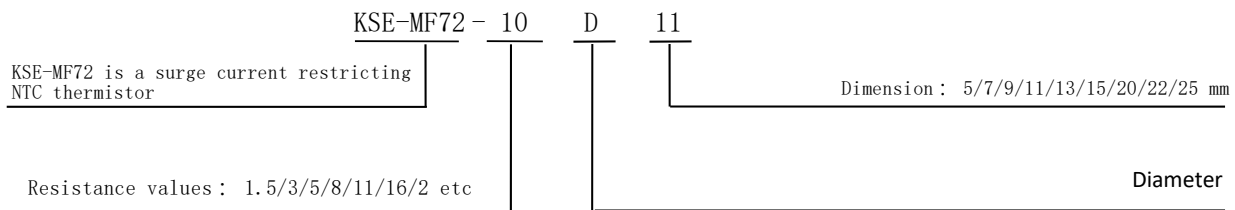


PRODUCT FEATURES

1. This product is compatible with RoHS
2. Size: $\phi 5\text{mm} \sim \phi 25\text{mm}$
3. Radial lead is coated in phenolic and silicone resin
4. High sensitivity
5. High rated power
6. Low cost
7. Wide operating temperature range:
 $\phi 5\text{mm} \sim \phi 7\text{mm}$: $-40 \sim 100^{\circ}\text{C}$
 $\phi 9\text{mm} \sim \phi 15\text{mm}$: $-40 \sim 150^{\circ}\text{C}$
 $\phi 20\text{mm} \sim \phi 22\text{mm}$: $-40 \sim 170^{\circ}\text{C}$
 $\phi 25\text{mm}$: $-40 \sim 200^{\circ}\text{C}$

APPLICATION

- Switching power supply, UPS power supply;
- Equipment: transformers, industrial control equipment, communication equipment, power equipment, medical equipment;
- Household appliances: air-conditioners, refrigerators, washing machines, adapter and others;
- Instruments.

MARKING AND PART NUMBER


Product name: NTC

Resistance: 1.5/3/5/8/10/16/20 etc

Size: 5/7/9/11/13/15/20/22/25mm etc

OTHER INFORMATION

Wire material: Not specified: CP wire; Cu: copper wire;

Lead type: Not specified: Inwardly curved leads; S — straight leads, 0 — outwardly curved leads, F — uneven leads.

Lead distance: Normal lead distance : 5.0mm, 7.5mm, 10mm.

Tolerance : Z1:±0.4mm、Z2:±0.5mm、not specified: ±0.8mm ;

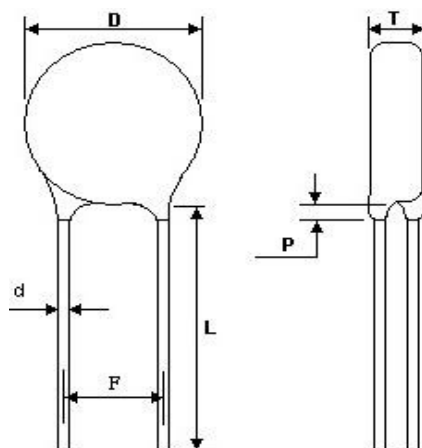
Lead length/tolerance : Not specified: normal lead length; C+number, for example

C3.2 indicates 3.2mm lead length: Z1:±0.4mm、Z2:±0.5mm、not specified: ±0.8mm, ;

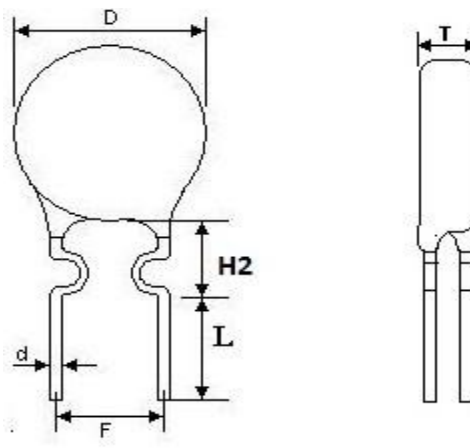
Possible variants: silicone resin color (B=Black,G=green), epoxy resin:E, No/P (standard black color), J:±5% resistor tolerance , K:±10% resistor tolerance ,

L:±15% resistor tolerance.

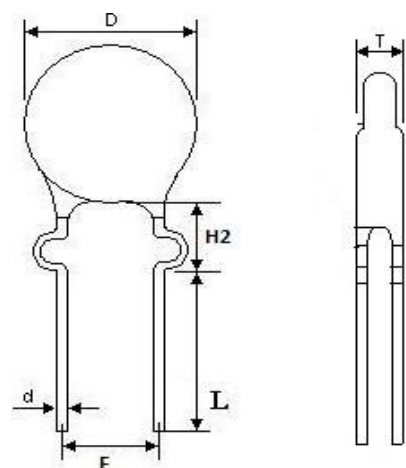
STRUCTURE AND SIZE



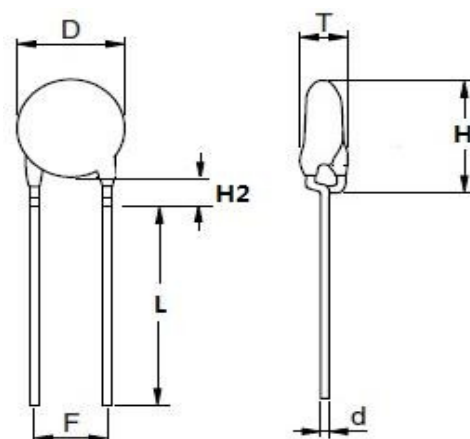
Straight leads



Inwardly curved leads

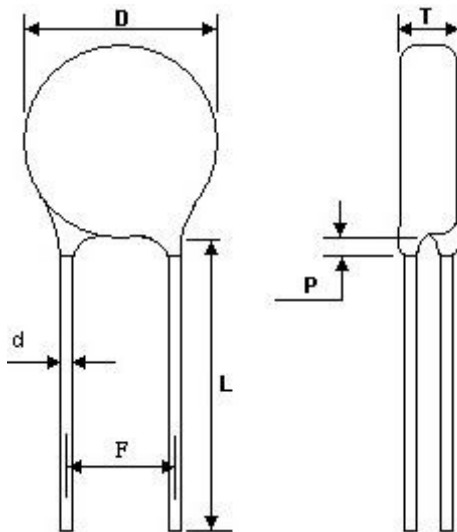


Outward curved leads

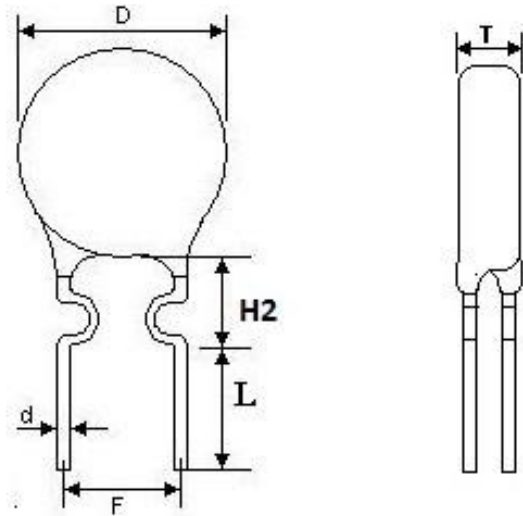


Uneven leads

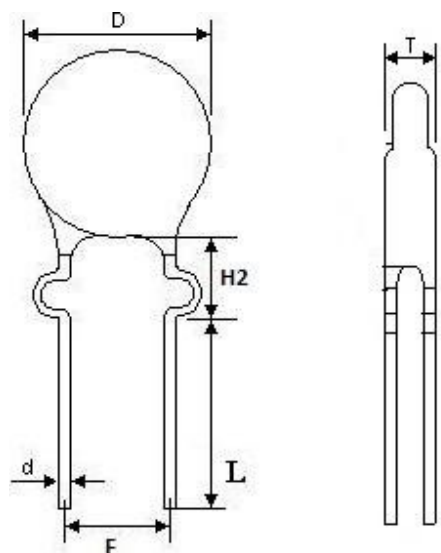
Type	Dimensions(mm)				
	Dmax	Lmin	T max	F $\pm$ 1	d $\pm$ 0.1
D5	7.5	20	6.0	5	0.6
D7	9.5	20	6.0	5	0.6
D9	11.5	20	6.5	5/7.5	0.6/0.8
D10	12.5	20	6.5	5/7.5/10	0.6/0.8
D11	13.5	20	6.5	5/7.5/10	0.6/0.8
D13	15.5	20	7.0	7.5/10	0.6/0.8
D15	18.0	20	7.0	7.5/10	0.8/1.0
D20	23.0	20	8.0	7.5/10	0.8/1.0
D22	25.0	20	8.0	7.5/10	0.8/1.0
D25	28.5	20	9.0	7.5/10	0.8/1.0

STRUCTURE AND SIZE


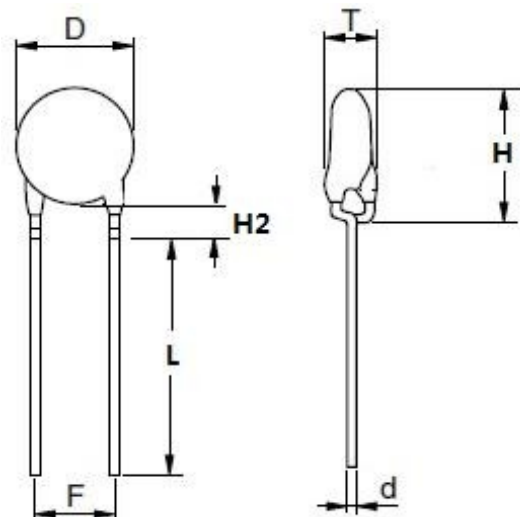
Straight leads



Inwardly curved leads



Outward curved leads



Uneven leads

MARKING OF PART NUMBER

KSE-MF72 - 10

D

11

KSE-MF72 is a surge current restricting
NTC thermistor

Dimension : 5/7/9/11/13/15/20/22/25 mm

Resistance values : 1.5/3/5/8/11/16/2 etc

Diameter

Part Number	Model No	Resistance (@ 25°C) R25, Ω	B Constant (25/85) ±10%, K	Max. Stable Current, A	Thermal Time Constant, s	Dissipa on Factor, mW/°C	Max Capacity (@240VAC), μF
KSE-MF72-1.5D5	KSE-1.5D-5	1.5	3200	1	≤25	≥9	47
KSE-MF72-2D5	KSE-2D-5	2		1			47
KSE-MF72-2.5D5	KSE-2.5D-5	2.5		1			47
KSE-MF72-3D5	KSE-3D-5	3		1			47
KSE-MF72-5D5	KSE-5D-5	5		1			47
KSE-MF72-7D5	KSE-7D-5	7		1			47
KSE-MF72-8D5	KSE-8D-5	8		1			47
KSE-MF72-10D5	KSE-10D-5	10		1			47
KSE-MF72-12D5	KSE-12D-5	12		1			47
KSE-MF72-15D5	KSE-15D-5	15		1			47
KSE-MF72-16D5	KSE-16D-5	16		1			47
KSE-MF72-20D5	KSE-20D-5	20		1			33
KSE-MF72-22D5	KSE-22D-5	22		1			33
KSE-MF72-30D5	KSE-30D-5	30		1			33
KSE-MF72-33D5	KSE-33D-5	33		0.5			33
KSE-MF72-36D5	KSE-36D-5	36		0.5			33
KSE-MF72-47D5	KSE-47D-5	47		0.5			33
KSE-MF72-50D5	KSE-50D-5	50		0.5			33
KSE-MF72-60D5	KSE-60D-5	60		0.4			33
KSE-MF72-68D5	KSE-68D-5	68		0.4			33
KSE-MF72-1.5D7	KSE-1.5D-7	1.5	3200	2	≤45	≥10	100
KSE-MF72-2D7	KSE-2D-7	2		2			100
KSE-MF72-3.3D7	KSE-3.3D-7	3.3		2			100
KSE-MF72-5D7	KSE-5D-7	5		2			100
KSE-MF72-7D7	KSE-7D-7	7		2			100
KSE-MF72-8D7	KSE-8D-7	8		1			100
KSE-MF72-10D7	KSE-10D-7	10		1			100
KSE-MF72-12D7	KSE-12D-7	12		1			100
KSE-MF72-15D7	KSE-15D-7	15		0.7			100
KSE-MF72-16D7	KSE-16D-7	16		0.7			100
KSE-MF72-20D7	KSE-20D-7	20		0.7			68
KSE-MF72-22D7	KSE-22D-7	22		0.6			68
KSE-MF72-33D7	KSE-33D-7	33		0.5			68
KSE-MF72-50D7	KSE-50D-7	50		0.3			68
KSE-MF72-1.5D9	KSE-1.5D-9	1.5	3200	5	≤45	≥10	150
KSE-MF72-2.5D9	KSE-2.5D-9	2.5		4			150
KSE-MF72-3D9	KSE-3D-9	3		4			150
KSE-MF72-4D9	KSE-4D-9	4		3			150
KSE-MF72-4.7D9	KSE-4.7D-9	4.7		3			150
KSE-MF72-5D9	KSE-5D-9	5		3			150
KSE-MF72-6D9	KSE-6D-9	6		2			150
KSE-MF72-8D9	KSE-8D-9	8		2			150

KSE-MF72-10D9	KSE-10D-9	10		2			150
KSE-MF72-12D9	KSE-12D-9	12		1			150
KSE-MF72-15D9	KSE-15D-9	15		1			150
KSE-MF72-16D9	KSE-16D-9	16		1			150
KSE-MF72-20D9	KSE-20D-9	20		1			150
KSE-MF72-22D9	KSE-22D-9	22		1			150
KSE-MF72-30D9	KSE-30D-9	30		1			100
KSE-MF72-33D9	KSE-33D-9	33		1			100
KSE-MF72-50D9	KSE-50D-9	50		0.8			100
KSE-MF72-60D9	KSE-60D-9	60		0.8			100
KSE-MF72-80D9	KSE-80D-9	80		0.6			100
KSE-MF72-1D10	KSE-1D-10	1	3200	5.5	≤70	≥11	220
KSE-MF72-1.3D10	KSE-1.3D-10	1.3		5.5			220
KSE-MF72-1.5D10	KSE-1.5D-10	1.5		5			220
KSE-MF72-2D10	KSE-2D-10	2		5			220
KSE-MF72-2.5D10	KSE-2.5D-10	2.5		5			220
KSE-MF72-3D10	KSE-3D-10	3		5			220
KSE-MF72-3.3D10	KSE-3.3D-10	3.3		5			220
KSE-MF72-4D10	KSE-4D-10	4		4			220
KSE-MF72-5D10	KSE-5D-10	5		4			220
KSE-MF72-6D10	KSE-6D-10	6		3.5			220
KSE-MF72-6.8D10	KSE-6.8D-10	6.8		3.5			220
KSE-MF72-8D10	KSE-8D-10	8		3			220
KSE-MF72-10D10	KSE-10D-10	10		3			220
KSE-MF72-12D10	KSE-12D-10	12		2			150
KSE-MF72-15D10	KSE-15D-10	15		2			150
KSE-MF72-16D10	KSE-16D-10	16		2			150
KSE-MF72-20D10	KSE-20D-10	20		1.5			150
KSE-MF72-22D10	KSE-22D-10	22		1.5			150
KSE-MF72-25D10	KSE-25D-10	25		1.5			150
KSE-MF72-30D10	KSE-30D-10	30		1.5			150
KSE-MF72-33D10	KSE-33D-10	33		1.5			150
KSE-MF72-47D10	KSE-47D-10	47		1.2			150
KSE-MF72-50D10	KSE-50D-10	50		1.2			150
KSE-MF72-60D10	KSE-60D-10	60		1			150
KSE-MF72-80D10	KSE-80D-10	80		1			150
KSE-MF72-1D11	KSE-1D-11	1	3500	5.5	≤70	≥11	220
KSE-MF72-1.3D11	KSE-1.3D-11	1.3		5.5			220
KSE-MF72-1.5D11	KSE-1.5D-11	1.5		5			220
KSE-MF72-2D11	KSE-2D-11	2		5			220
KSE-MF72-2.5D11	KSE-2.5D-11	2.5		5			220
KSE-MF72-3D11	KSE-3D-11	3		5			220
KSE-MF72-3.3D11	KSE-3.3D-11	3.3		5			220
KSE-MF72-4D11	KSE-4D-11	4		4			220
KSE-MF72-5D11	KSE-5D-11	5		4			220
KSE-MF72-6D11	KSE-6D-11	6		3.5			220

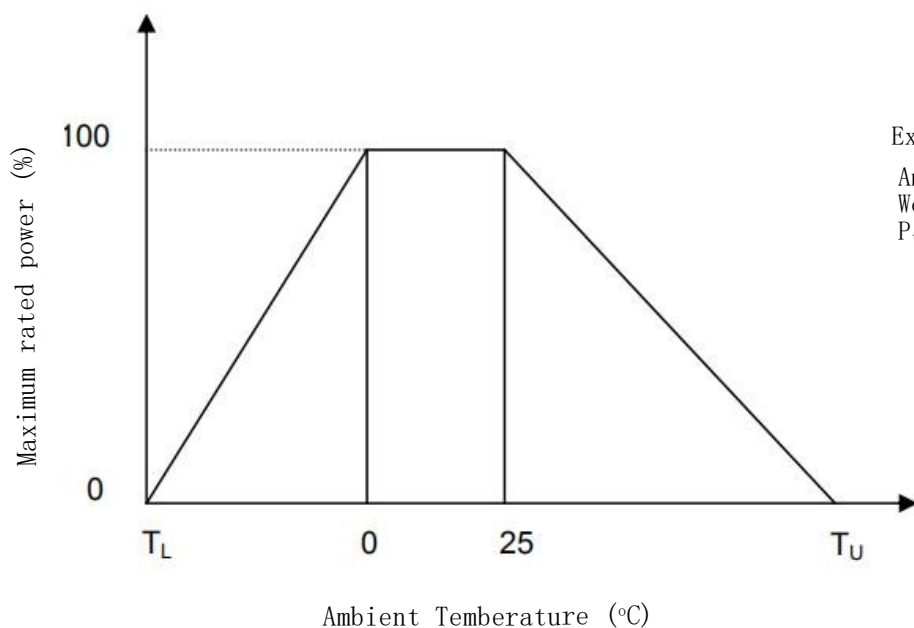
KSE-MF72-6.8D11	KSE-6.8D-11	6.8		3.5			220
KSE-MF72-8D11	KSE-8D-11	8		3			220
KSE-MF72-10D11	KSE-10D-11	10		3			220
KSE-MF72-12D11	KSE-12D-11	12		2			150
KSE-MF72-15D11	KSE-15D-11	15		2			150
KSE-MF72-16D11	KSE-16D-11	16		2			150
KSE-MF72-20D11	KSE-20D-11	20		1.5			150
KSE-MF72-22D11	KSE-22D-11	22		1.5			150
KSE-MF72-25D11	KSE-25D-11	25		1.5			150
KSE-MF72-30D11	KSE-30D-11	30		1.5			150
KSE-MF72-33D11	KSE-33D-11	33		1.5			150
KSE-MF72-47D11	KSE-47D-11	47		1.2			150
KSE-MF72-56D11	KSE-56D-11	50		1.2			150
KSE-MF72-60D11	KSE-60D-11	60		1			150
KSE-MF72-80D11	KSE-80D-11	80		1			150
KSE-MF72-0.7D13	KSE-0.7D-13	0.7	3500	7	≤90	≥13	330
KSE-MF72-1D13	KSE-1D-13	1		7			330
KSE-MF72-1.3D13	KSE-1.3D-13	1.3		6.5			330
KSE-MF72-1.5D13	KSE-1.5D-13	1.5		6			330
KSE-MF72-2D13	KSE-2D-13	2		6			330
KSE-MF72-2.5D13	KSE-2.5D-13	2.5		5.5			330
KSE-MF72-3D13	KSE-3D-13	3		5.5			330
KSE-MF72-4D13	KSE-4D-13	4		5			330
KSE-MF72-4.7D13	KSE-4.7D-13	4.7		5			330
KSE-MF72-5D13	KSE-5D-13	5		5			330
KSE-MF72-6D13	KSE-6D-13	6		4.5			330
KSE-MF72-7D13	KSE-7D-13	7		4.5			330
KSE-MF72-8D13	KSE-8D-13	8		4			330
KSE-MF72-10D13	KSE-10D-13	10		4			330
KSE-MF72-12D13	KSE-12D-13	12		3.5			330
KSE-MF72-15D13	KSE-15D-13	15		3			330
KSE-MF72-16D13	KSE-16D-13	16		3			330
KSE-MF72-18D13	KSE-18D-13	18		3			330
KSE-MF72-20D13	KSE-20D-13	20		2.5			330
KSE-MF72-30D13	KSE-30D-13	30		2.5			220
KSE-MF72-47D13	KSE-47D-13	47		2			220
KSE-MF72-60D13	KSE-60D-13	60		2			220
KSE-MF72-0.7D15	KSE-0.7D-15	0.7	3500	8	≤110	≥16	560
KSE-MF72-1D15	KSE-1D-15	1		7.5			560
KSE-MF72-1.3D15	KSE-1.3D-15	1.3		7.5			560
KSE-MF72-1.5D15	KSE-1.5D-15	1.5		7.5			560
KSE-MF72-2D15	KSE-2D-15	2		7			560
KSE-MF72-2.2D15	KSE-2.2D-15	2.2		7			560
KSE-MF72-2.5D15	KSE-2.5D-15	2.5		7			560
KSE-MF72-3D15	KSE-3D-15	3		7			560
KSE-MF72-3.3D15	KSE-3.3D-15	3.3		7			560

KSE-MF72-4D15	KSE-4D-15	4		7			560
KSE-MF72-4.7D15	KSE-4.7D-15	4.7		6			560
KSE-MF72-5D15	KSE-5D-15	5		6			560
KSE-MF72-6D15	KSE-6D-15	6		5.5			560
KSE-MF72-7D15	KSE-7D-15	7		5.5			560
KSE-MF72-8D15	KSE-8D-15	8		5			560
KSE-MF72-10D15	KSE-10D-15	10		5			560
KSE-MF72-12D15	KSE-12D-15	12		4			470
KSE-MF72-15D15	KSE-15D-15	15		4			470
KSE-MF72-16D15	KSE-16D-15	16		4			470
KSE-MF72-18D15	KSE-18D-15	18		4			470
KSE-MF72-20D15	KSE-20D-15	20		4			470
KSE-MF72-25D15	KSE-25D-15	25		3.5			470
KSE-MF72-30D15	KSE-30D-15	30		3.5			470
KSE-MF72-33D15	KSE-33D-15	33		3			470
KSE-MF72-40D15	KSE-40D-15	40		3			470
KSE-MF72-47D15	KSE-47D-15	47		3			470
KSE-MF72-50D15	KSE-50D-15	50		2.5			47
KSE-MF72-0.7D20	KSE-0.7D-20	0.7	2800	10	≤180	≥20	800
KSE-MF72-1D20	KSE-1D-20	1		9.5			800
KSE-MF72-1.3D20	KSE-1.3D-20	1.3		9			800
KSE-MF72-1.5D20	KSE-1.5D-20	1.5		9			800
KSE-MF72-2D20	KSE-2D-20	2		8.5			800
KSE-MF72-2.2D20	KSE-2.2D-20	2.2		8.5			800
KSE-MF72-2.5D20	KSE-2.5D-20	2.5		8			800
KSE-MF72-3D20	KSE-3D-20	3		8			800
KSE-MF72-3.3D20	KSE-3.3D-20	3.3		8			800
KSE-MF72-4D20	KSE-4D-20	4		7			800
KSE-MF72-4.7D20	KSE-4.7D-20	4.7		7			800
KSE-MF72-5D20	KSE-5D-20	5		7			800
KSE-MF72-6D20	KSE-6D-20	6		6			800
KSE-MF72-6.8D20	KSE-6.8D-20	6.8		6			800
KSE-MF72-7D20	KSE-7D-20	7		6			800
KSE-MF72-8D20	KSE-8D-20	8		6			800
KSE-MF72-10D20	KSE-10D-20	10		6			800
KSE-MF72-12D20	KSE-12D-20	12		5			650
KSE-MF72-15D20	KSE-15D-20	15		5			650
KSE-MF72-16D20	KSE-16D-20	16		5			650
KSE-MF72-18D20	KSE-18D-20	18		5			650
KSE-MF72-20D20	KSE-20D-20	20		4.5			650
KSE-MF72-25D20	KSE-25D-20	25		4.5			650
KSE-MF72-30D20	KSE-30D-20	30		4.5			650
KSE-MF72-47D20	KSE-47D-20	47		4			650
KSE-MF72-0.7D22	KSE-0.7D-22	0.7	2800	10	≤200	≥22	800
KSE-MF72-1D22	KSE-1D-22	1		9.5			800
KSE-MF72-1.3D22	KSE-1.3D-22	1.3		9.5			800

KSE-MF72-1.5D22	KSE-1.5D-22	1.5		9			800
KSE-MF72-2D22	KSE-2D-22	2		8.5			800
KSE-MF72-2.2D22	KSE-2.2D-22	2.2		8.5			800
KSE-MF72-2.5D22	KSE-2.5D-22	2.5		8			800
KSE-MF72-3D22	KSE-3D-22	3		8			800
KSE-MF72-4D22	KSE-4D-22	4		7			800
KSE-MF72-5D22	KSE-5D-22	5		7			800
KSE-MF72-6D22	KSE-6D-22	6		6			800
KSE-MF72-8D22	KSE-8D-22	8		6			800
KSE-MF72-10D22	KSE-10D-22	10		6			800
KSE-MF72-12D22	KSE-12D-22	12		5			650
KSE-MF72-15D22	KSE-15D-22	15		5			650
KSE-MF72-16D22	KSE-16D-22	16		5			650
KSE-MF72-20D22	KSE-20D-22	20		4.5			650
KSE-MF72-0.7D25	KSE-0.7D-25	0.7	2800	13	≤220	≥25	800
KSE-MF72-1D25	KSE-1D-25	1		12			800
KSE-MF72-1.3D25	KSE-1.3D-25	1.3		11			800
KSE-MF72-1.5D25	KSE-1.5D-25	1.5		10			800
KSE-MF72-2D25	KSE-2D-25	2		9			800
KSE-MF72-3D25	KSE-3D-25	3		8			800
KSE-MF72-5D25	KSE-5D-25	5		7			800
KSE-MF72-6D25	KSE-6D-25	6		6			800
KSE-MF72-8D25	KSE-8D-25	8		6			800
KSE-MF72-10D25	KSE-10D-25	10		6			800
KSE-MF72-12D25	KSE-12D-25	12		5			650
KSE-MF72-15D25	KSE-15D-25	15		5			650
KSE-MF72-16D25	KSE-16D-25	16		5			650
KSE-MF72-20D25	KSE-20D-25	20		4.5			650

Note: If not stated otherwise, normal zero-power resistance tolerance is $\pm 20\%$

DERATING CURVE



Working temperature upper limit (°C)

Working temperature lower limit (°C)

Example:

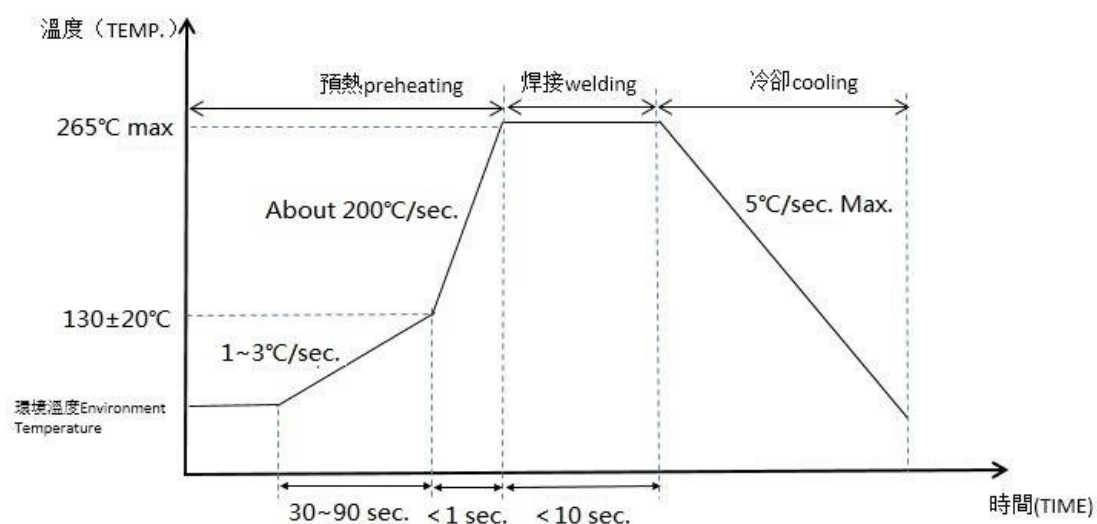
Ambient temperature (T_a) = 55°C

Working temperature upper limit T_u = 200°C

$P_{ta} = (T_u - T_a) / (T_u - 25) \times P_{max} \approx 82\% P_{max}$

WAVE-SOLDERING CURVE

Welding temperature curve



WELDING CONDITIONS

Soldering temperature	400°C max
Welding time	3.5s max
Soldering iron wattage	50W max.

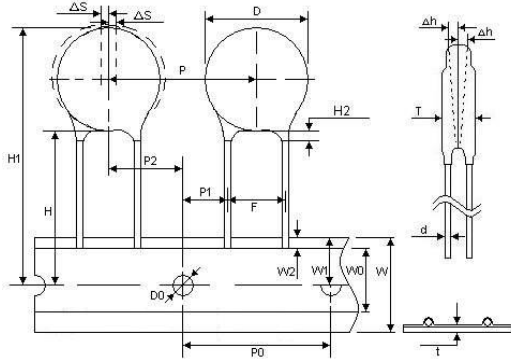
RELIABILITY

Test parameter	Testing criteria	Testing condition/methods			Performance requirement																			
Solderability Test	IEC60068-2-20	焊錫溫度 235±3℃ 焊錫時間 2±0.3 秒 浸沾 25%之松香助焊劑 注：試驗結束後於標準狀態下 4~24 小時后測試電氣特性			浸沾導線之圓周方向 須有 95%以上之面積 為焊錫所均勻附著																			
Solder heat resistance	IEC60068-2-20	焊錫溫度：260±5℃ 焊錫時間：10±1 秒 浸漬深度：距離本體為 1.5~2.0mm			无可见损伤 Δ R/ R _N ≤20% (Δ R = R _N - R _N '																			
Terminal Strength	IEC60068-2-21	<table><tr><td>標稱線 mm(d)</td><td>拉力 kg</td><td>保持时间</td></tr><tr><td>0.35 < d≤0.50</td><td>0.50</td><td rowspan="3">10±1 秒</td></tr><tr><td>0.50 < d≤0.80</td><td>1.00</td></tr><tr><td>0.80 < d≤1.25</td><td>2.00</td></tr><tr><td>標稱線 mm(d)</td><td>拉力 kg</td><td rowspan="4">以每次 2~3 秒速度彎轉 90 度，試驗次數 2 次</td></tr><tr><td>0.35 < d≤0.50</td><td>0.25</td></tr><tr><td>0.50 < d≤0.80</td><td>0.50</td></tr><tr><td>0.80 < d≤1.25</td><td>1.00</td></tr></table>			標稱線 mm(d)	拉力 kg	保持时间	0.35 < d≤0.50	0.50	10±1 秒	0.50 < d≤0.80	1.00	0.80 < d≤1.25	2.00	標稱線 mm(d)	拉力 kg	以每次 2~3 秒速度彎轉 90 度，試驗次數 2 次	0.35 < d≤0.50	0.25	0.50 < d≤0.80	0.50	0.80 < d≤1.25	1.00	无可见损伤 Δ R/ R _N ≤20% (Δ R = R _N - R _N '
		標稱線 mm(d)	拉力 kg	保持时间																				
		0.35 < d≤0.50	0.50	10±1 秒																				
		0.50 < d≤0.80	1.00																					
		0.80 < d≤1.25	2.00																					
		標稱線 mm(d)	拉力 kg	以每次 2~3 秒速度彎轉 90 度，試驗次數 2 次																				
		0.35 < d≤0.50	0.25																					
		0.50 < d≤0.80	0.50																					
0.80 < d≤1.25	1.00																							
注：試驗結束後 25℃±2℃狀態下 4~24 小時后測試零功率電阻 R _N																								
Moisture Resistance	IEC60068-2-3	試驗溫度：40±2℃ 試驗濕度：93±3% 試驗時間：1000±24 小時 注：試驗結束後 25℃±2℃狀態下 4~24 小時后測試零功率電阻 R _N			无可见损伤 Δ R/ R _N ≤20% (Δ R = R _N - R _N '																			
Fast Temperature Change	IEC60068-2-14	温度快速变化按下表条件循环 5 个周期。			无可见损伤 Δ R/ R _N ≤20% (Δ R = R _N - R _N '																			
		<table><tr><td>步骤</td><td>温度 (℃)</td><td>周期 (分钟)</td></tr><tr><td>1</td><td>Ta ± 5</td><td>30 ± 3</td></tr><tr><td>2</td><td>室温</td><td>5 ± 3</td></tr><tr><td>3</td><td>Tu ± 5</td><td>30 ± 3</td></tr><tr><td>4</td><td>室温</td><td>5 ± 3</td></tr></table>				步骤	温度 (℃)	周期 (分钟)	1	Ta ± 5	30 ± 3	2	室温	5 ± 3	3	Tu ± 5	30 ± 3	4	室温	5 ± 3				
		步骤	温度 (℃)	周期 (分钟)																				
		1	Ta ± 5	30 ± 3																				
		2	室温	5 ± 3																				
		3	Tu ± 5	30 ± 3																				
4	室温	5 ± 3																						
Vibration test	IEC60068-2-6	振幅：0.75mm 或 98m/s2 頻率：10Hz~55Hz (從 10 Hz-55Hz-10Hz 持續時間為 1分鐘)			試驗后外觀無任何異常狀況; Δ R/ R _N ≤20%																			

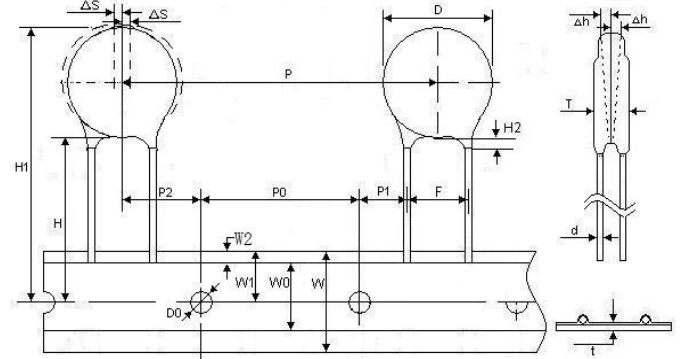
		時間: X/Y/Z 軸各 2 小時, 共 6H	$(\Delta R = R_N - R_{N'})$
Bump test	GB/T 2423.6-1995	加速度: 500m/s ² 方向與次數: 三軸六向, 一共 18 次。 時間: 11ms	試驗后外觀無任何異常狀況; $\Delta R / R_N \leq 20\%$ $(\Delta R = R_N - R_{N'})$
Atmospheric conditions sequence	IEC60068-2-13 IEC60068-2-30	乾熱: 上限溫度持續 16h 濕熱循環: 55°C, 一個循環, 24h 寒冷: 下限溫度持續 2h 濕熱循環: 55°C, 剩餘 5 個循環, 一個循環 24h	試驗后外觀無任何異常狀況; $\Delta R / R_N \leq 20\%$ $(\Delta R = R_N - R_{N'})$
Low temperatures test	IEC60068-2-1	溫度: 下限溫度 $\pm 3^\circ\text{C}$ 持續時間: 168h (7d)	試驗后外觀無任何異常狀況; $\Delta R / R_N \leq 20\%$ $(\Delta R = R_N - R_{N'})$
High Temperatures test	IEC60068-2-2	溫度: 上限溫度 $\pm 5^\circ\text{C}$ 持續時間: 168h (7d)	試驗后外觀無任何異常狀況; $\Delta R / R_N \leq 20\%$ $(\Delta R = R_N - R_{N'})$
Electric rotational test	UL1434	環境溫度: $25^\circ\text{C} \pm 2^\circ\text{C}$ 循環次數: 1000 次 (施加最大穩態電流 $I_{\text{max}25}$, 電源閉合 1min 斷開 5min 為一次循環) 注: 試驗結束後 $25^\circ\text{C} \pm 2^\circ\text{C}$ 狀態下 4~24 小時后測試零功率電阻 R_N	$\Delta R / R_N \leq 20\%$ $(\Delta R = R_N - R_{N'})$
Max Steady-state current	IEC60539-1	環境溫度: $25^\circ\text{C} \pm 2^\circ\text{C}$ 測試時間: 1000 ± 24 小時 (施加最大穩態電流 $I_{\text{max}25}$ 持續 1000 ± 24 小時) 注: 試驗結束後 $25^\circ\text{C} \pm 2^\circ\text{C}$ 狀態下 4~24 小時后測試零功率電阻 R_N	$\Delta R / R_N \leq 20\%$ $(\Delta R = R_N - R_{N'})$
Upper category Temperature reliability	IEC60068-2-2	環境溫度: 上限類別溫度 $\pm 2^\circ\text{C}$ 測試時間: 1000 ± 24 小時 在 168h、500h、1000h 測量零功率電阻值。注: 試驗結束後 $25^\circ\text{C} \pm 2^\circ\text{C}$ 狀態下 4~24 小時后測試零功率電阻 R_N	外觀應無可見損傷, 標印清晰; $\Delta R / R_N \leq 20\%$ $(\Delta R = R_N - R_{N'})$
Max allowed capacitance	IEC60539-1 2008	選擇特定容量的電容器 C_T ; 充電電壓: 375Vd.c; 環境溫度: $15^\circ\text{C} \sim 35^\circ\text{C}$; 電容器放電次數: 1000 次; 注: 試驗結束後 $25^\circ\text{C} \pm 2^\circ\text{C}$ 狀態下 4~24 小時后測試零功率電阻 R_N	外觀無可見損傷, 標誌清晰。 $\Delta R_N / R_N \leq 20\%$

Packaging type

● Taping pack lead style Straight



圖一 (FIG. 1)

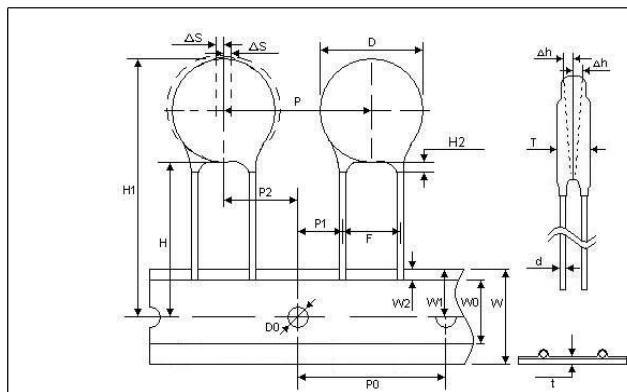


圖二 (FIG. 2)

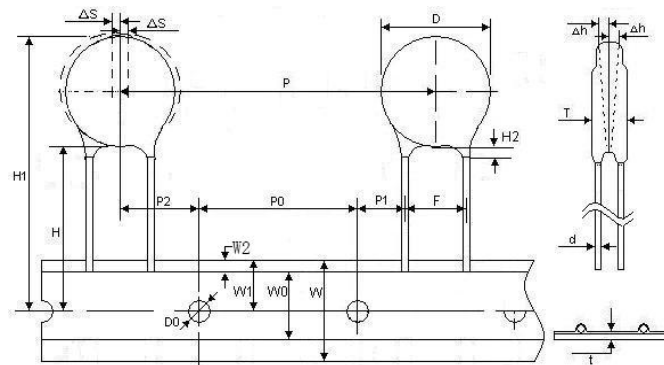
單位(unit): mm

位置代号 (Symbol)	標示位置 (Item)	PO=12.7			PO=15.0		
		D5/D7	D9/D10/D11	D13/D15/D20/ D22/D25	D5/D7	D9/D10/D11	D13/D15/D20/ D22/D25
F	Lead to lead distance	5.0±1.0	5.0/7.5/10.0±1.0	7.5/10.0±1.0	5.0±1.0	5.0/7.5/10.0±1.0	7.5/10.0±1.0
P	Pitch of component	12.7±1.0	25.4±1.0	25.4±1.0	15±1.0	15±1.0	30±1.0
P0	Feed hole pitch	12.7±0.3	12.7±0.3	12.7±0.3	15±0.3	15±0.3	15±0.3
P1	Feed hole center to lead center	3.85±0.7	2.6±0.7	2.6±0.7	5.0±0.7	3.75±0.7	3.75±0.7
P2	Feed hole center to body center	6.35±1.3	6.35±1.3	6.35±1.3	7.5±1.3	7.5±1.3	7.5±1.3
△s	Component alignment R-L	0±2	0±2	0±4	0±2	0±2	0±4
W	Tape width	18.0±1.0	18.0±1.0	18.0±1.0	18.0±1.0	18.0±1.0	18.0±1.0
W0	Hold down tape width	7.5min	7.5min	7.5min	7.5min	7.5min	7.5min
W1	Hold position	9.0±0.75	9.0±0.75	9.0±0.75	9.0±0.75	9.0±0.75	9.0±0.75
W2	Hole down tape position	3.0max	3.0max	3.0max	3.0max	3.0max	3.0max
H	Height of component from tape center	20.0±2.0	20.0±2.0	20.0±2.0	20.0±2.0	20.0±2.0	20.0±2.0
H1	Component height	29max	34 max	37 max	29max	34 max	37 max
H2	Dip Length	3.0max	3.0max	3.0max	3.0max	3.0max	3.0max
D0	Feed hole diameter	4.0±0.2	4.0±0.2	4.0±0.2	4.0±0.2	4.0±0.2	4.0±0.2
t	Total tape thickness	0.6±0.3	0.6±0.3	0.6±0.3	0.6±0.3	0.6±0.3	0.6±0.3
d	Wire Diameter	0.60±0.1	0.80±0.1	0.80±0.1	0.60±0.1	0.80±0.1	0.80±0.1
D	Max Diameter	See page 2					
T	Max Thickness	See page 2					
適用圖形 (Apply the graphics)		FIG. 1	FIG. 1	FIG. 2	FIG. 1	FIG. 1	FIG. 2

● Outside crimped



圖一 (FIG. 1)

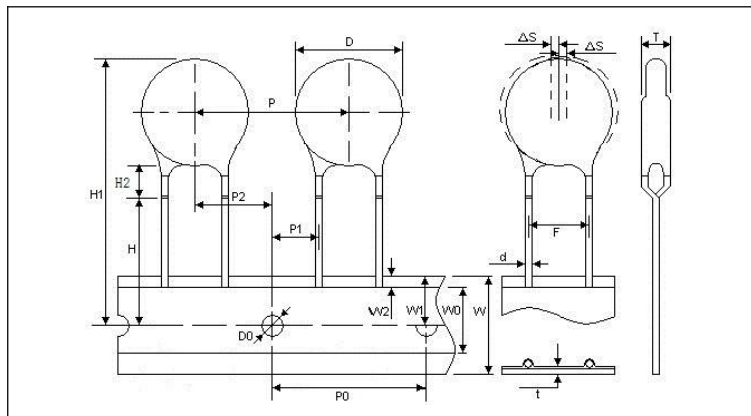


圖二 (FIG. 2)

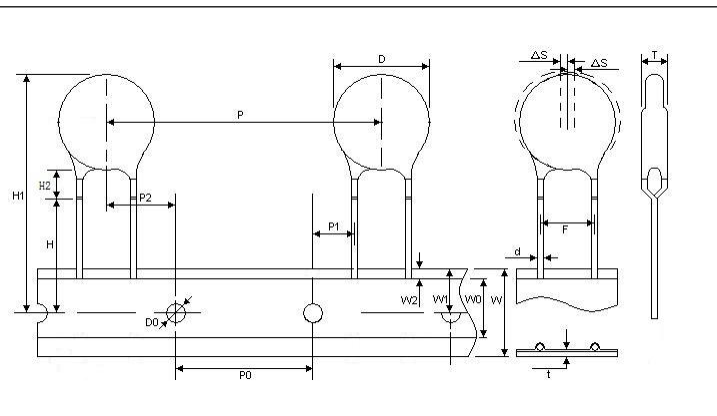
單位(unit): mm

位置代字 (Symbol)	標示位置 (Item)	PO=12.7			PO=15.0		
		D5/D7	D9/D10/D11	D13/D15/D20/ D22/D25	D5/D7	D9/D10/D11	D13/D15/D20/ D22/D25
F	Lead to lead distance	5.0±1.0	5.0/7.5/10.0±1.0 0	7.5/10.0±1.0	5.0±1.0	5.0/7.5/10.0±1.0 0	7.5/10.0±1.0
P	Pitch of component	12.7±1.0	25.4±1.0	25.4±1.0	15±1.0	15±1.0	30±1.0
P0	Feed hole pitch	12.7±0.3	12.7±0.3	12.7±0.3	15±0.3	15±0.3	15±0.3
P1	Feed hole center to lead center	3.85±0.7	2.6±0.7	2.6±0.7	5.0±0.7	3.75±0.7	3.75±0.7
P2	Feed hole center to body center	6.35±1.3	6.35±1.3	6.35±1.3	7.5±1.3	7.5±1.3	7.5±1.3
△s	Component alignment R-L	0±2	0±2	0±4	0±2	0±2	0±4
W	Tape width	18.0±1.0	18.0±1.0	18.0±1.0	18.0±1.0	18.0±1.0	18.0±1.0
W0	Hold down tape width	7.5min	7.5min	7.5min	7.5min	7.5min	7.5min
W1	Hold position	9.0±0.75	9.0±0.75	9.0±0.75	9.0±0.75	9.0±0.75	9.0±0.75
W2	Hole down tape position	3.0max	3.0max	3.0max	3.0max	3.0max	3.0max
H	Height of component from tape center	20.0±2.0	20.0±2.0	20.0±2.0	20.0±2.0	20.0±2.0	20.0±2.0
H1	Component height	29max	34 max	37 max	29max	34 max	37 max
H2	Dip Length	3.0max	3.0max	3.0max	3.0max	3.0max	3.0max
D0	Feed hole diameter	4.0±0.2	4.0±0.2	4.0±0.2	4.0±0.2	4.0±0.2	4.0±0.2
t	Total tape thickness	0.6±0.3	0.6±0.3	0.6±0.3	0.6±0.3	0.6±0.3	0.6±0.3
d	Wire Diameter	0.60±0.1	0.80±0.1	0.80±0.1	0.60±0.1	0.80±0.1	0.80±0.1
D	Max Diameter	See page 2					
T	Max Thickness	See page 2					
適用圖形 (Apply the graphics)		FIG. 1	FIG. 1	FIG. 2	FIG. 1	FIG. 1	FIG. 2

● Vertical crimped taping



圖一 (FIG. 1)

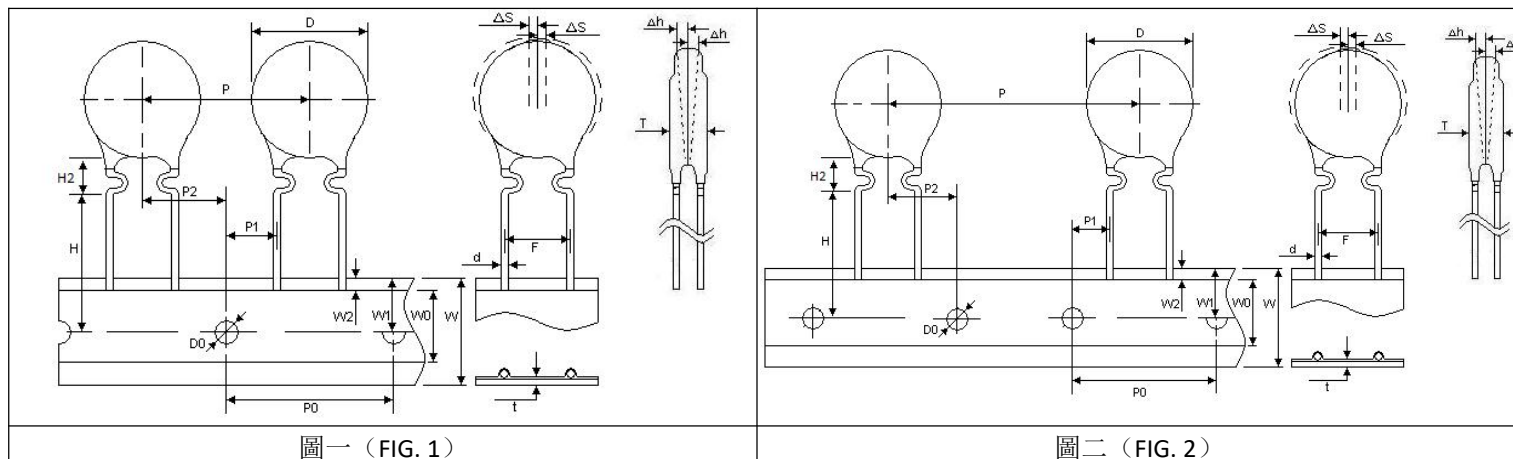


圖二 (FIG. 2)

單位(unit): mm

位置代字 (Symbol)	標示位置 (Item)	PO=12.7			PO=15.0		
		D5/D7	D9/D10/D11	D13/D15/D20/ D22/D25	D5/D7	D9/D10/D11	D13/D15/D20/ D22/D25
F	Lead to lead distance	5.0±1.0	7.5±1.0	7.5±1.0	5.0±1.0	7.5±1.0	7.5±1.0
P	Pitch of component	12.7±1.0	12.7±1.0	25.4±1.0	15±1.0	15±1.0	30±1.0
P0	Feed hole pitch	12.7±0.3	12.7±0.3	12.7±0.3	15±0.3	15±0.3	15±0.3
P1	Feed hole center to lead center	3.85±0.7	2.6±0.7	2.6±0.7	5.0±0.7	3.75±0.7	3.75±0.7
P2	Feed hole center to body center	6.35±1.3	6.35±1.3	6.35±1.3	7.5±1.3	7.5±1.3	7.5±1.3
△s	Component alignment R-L	0±2	0±2	0±4	0±2	0±2	0±4
W	Tape width	18.0±1.0	18.0±1.0	18.0±1.0	18.0±1.0	18.0±1.0	18.0±1.0
W0	Hold down tape width	7.5min	7.5min	7.5min	7.5min	7.5min	7.5min
W1	Hold position	9.0±0.75	9.0±0.75	9.0±0.75	9.0±0.75	9.0±0.75	9.0±0.75
W2	Hole down tape position	3.0max	3.0max	3.0max	3.0max	3.0max	3.0max
H	Height of component from tape center	16±2.0	16±2.0	16±2.0	16±2.0	16±2.0	16±2.0
H1	Component height	29max	34 max	37 max	29max	34 max	37 max
H2	Dip Length	4.8max	4.8max	4.8max	4.8max	4.8max	4.8max
D0	Feed hole diameter	4.0±0.2	4.0±0.2	4.0±0.2	4.0±0.2	4.0±0.2	4.0±0.2
t	Total tape thickness	0.6±0.3	0.6±0.3	0.6±0.3	0.6±0.3	0.6±0.3	0.6±0.3
d	Wire Diameter	0.60±0.1	0.80±0.1	0.80±0.1	0.60±0.1	0.80±0.1	0.80±0.1
D	Max Diameter	See page 2					
T	Max Thickness	See page 2					
適用圖形 (Apply the graphics)		FIG. 1	FIG. 1	FIG. 2	FIG. 1	FIG. 1	FIG. 2

● Inside crimped)



圖一 (FIG. 1)

圖二 (FIG. 2)

單位(Unit): mm

位置代字 (Symbol)	標示位置 (Item)	PO=12.7			PO=15.0		
		D5/D7	D9/D10/D11	D13/D15/D20/ D22/D25	D5/D7	D9/D10/D11	D13/D15/D20/ D22/D25
F	Lead to lead distance	5.0±1.0	7.5±1.0	7.5±1.0	5.0±1.0	7.5±1.0	7.5±1.0
P	Pitch of component	12.7±1.0	12.7±1.0	25.4±1.0	15±1.0	15±1.0	30±1.0
P0	Feed hole pitch	12.7±0.3	12.7±0.3	12.7±0.3	15±1.0	15±1.0	15±1.0
P1	Feed hole center to lead center	3.85±0.7	2.6±0.7	2.6±0.7	5.0±0.7	3.75±0.7	3.75±0.7
P2	Feed hole center to body center	6.35±1.3	6.35±1.3	6.35±1.3	7.5±1.3	7.5±1.3	7.5±1.3
△s	Component alignment R-L	0±2	0±2	0±4	0±2	0±2	0±4
W	Tape width	18.0±1.0	18.0±1.0	18.0±1.0	18.0±1.0	18.0±1.0	18.0±1.0
W0	Hold down tape width	7.5min	7.5min	7.5min	7.5min	7.5min	7.5min
W1	Hold position	9.0±0.75	9.0±0.75	9.0±0.75	9.0±0.75	9.0±0.75	9.0±0.75
W2	Hole down tape position	3.0max	3.0max	3.0max	3.0max	3.0max	3.0max
H	Height of component from tape center	16±2.0	16±2.0	16±2.0	16±2.0	16±2.0	16±2.0
H1	Component height	29max	34 max	37 max	29max	34 max	37 max
H2	Dip Length	4.8max	4.8max	4.8max	4.8max	4.8max	4.8max
D0	Feed hole diameter	4.0±0.2	4.0±0.2	4.0±0.2	4.0±0.2	4.0±0.2	4.0±0.2
t	Total tape thickness	0.6±0.3	0.6±0.3	0.6±0.3	0.6±0.3	0.6±0.3	0.6±0.3
d	Wire Diameter	0.60±0.1	0.80±0.1	0.80±0.1	0.60±0.1	0.80±0.1	0.80±0.1
D	Max Diameter	See page 2					
T	Max Thickness	See page 2					
適用圖形 (Apply the graphics)		FIG. 1	FIG. 1	FIG. 2	FIG. 1	FIG. 1	FIG. 2

◆PACKAGES

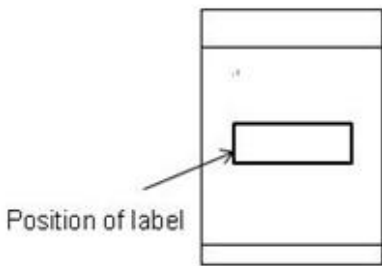
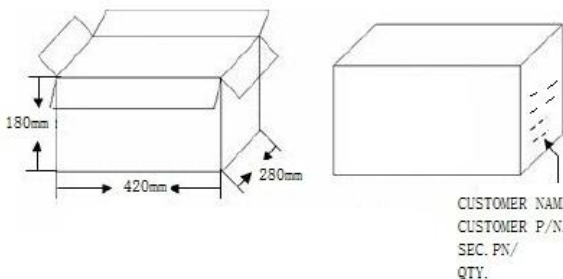
Bulk For PE Bag

類型 (TYPE)	包裝數量 (package quantity)
D5/D7	1000pcs
D9/D10/D11	500pcs
D13/D15	250pcs
D20/D22/D25	100pcs

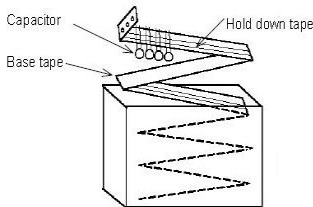
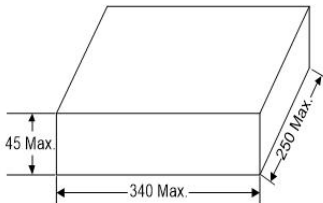
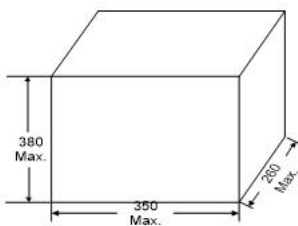
Ammo&Reel

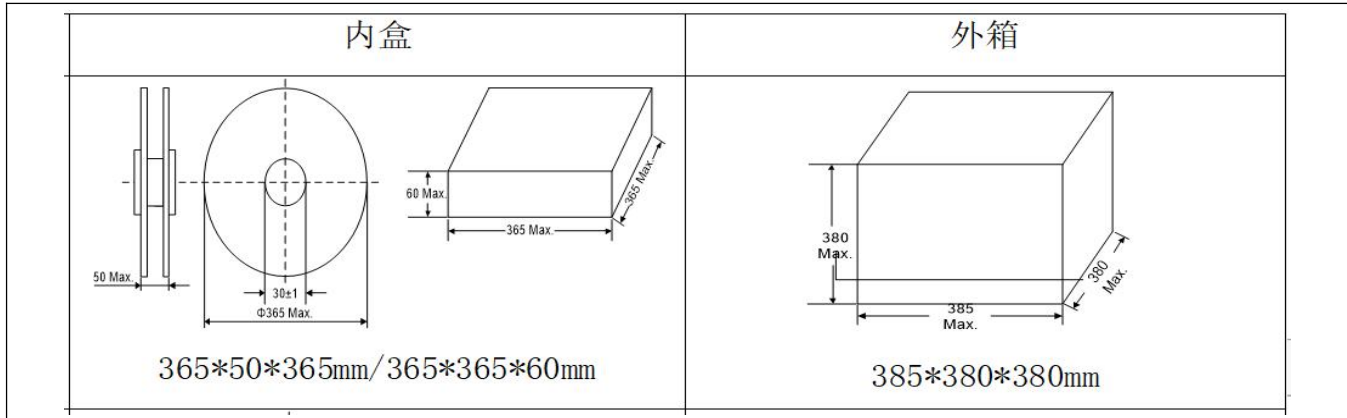
類型 (TYPE)	包裝數量 (package quantity)	
	編帶盒裝(Ammo)	卷軸包裝(Reel)
D5/D7	1000pcs	1000pcs
D9/D10/D11/D13/D15	500pcs	500pcs
D20/D22/D25	N/A	N/A

Bulk

PE 袋 (PE BAG)	外箱 (OUT-BOX)
 Position of label	 CUSTOMER NAME. CUSTOMER P/N. SEC. PN/ QTY.
/	裝 16 袋 (16 bags)

Ammo

內箱說明 (IN-BOX state)	內箱 (IN-BOX)	外箱 (OUT-BOX)
	 340*250*45mm	 350*260*380mm
/	/	/

Reel

◆STORAGE

- Storage conditions) :
 - 1、 Storage temperature : -10℃ ~ +40℃
 - 2、 Relative humidity : ≦ 75%RH
 - 3、 Storage period: one year
- Do not use this product in corrosive gases or direct sunlight environment preservation).