

Spark Gap Protectors (SPG)

JSE 3.1X5.3 Series

Specification of surge absorber

一.範圍: 本規格書為玻璃管型突波吸收器之系列產品.

I.Scope: This speciation covers the series products of the tube type of Surge Absorber.

二. 製品型名:

II. Part Number System :

例: JSE-----201-----M-----T-----52-----3153

Example:

1

2

3

4

5

6

(1) 系列名稱

Series Name

JSE	
靜電型 Electrostatic type	通訊型 Communication type

(2) 直流放電電壓

DC Spark-Over Voltage

前兩位為有效數.第三位數字為 10^1 .例如251為 $25 \times 10^1 = 250$.

The first two digits are a multiplicand. The third number is 101.

For example:251 means $25 \times 10 = 250$.

單位表示伏特(V).

The Unit of voltage is V.

(3)直流放電容許誤差值.

Tolerance of DC Spark-Over Voltage

L	M	N
±15%	±20%	±30%

(4)包裝形態.

Packaging

T	B	RF
帶裝 Taping	散裝 Bulk	帶裝(PANA) Reel

(5) 帶裝尺寸

Taping Dimension

26	52
26mm	52mm

(6) 玻璃管尺寸 3.1X5.3MM

GLASS TUBE DIMENSINON 3.1*5.3MM

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三. 溫度範圍.

III. Temperature range

(1) 使用溫度範圍-25℃ -----+65℃.

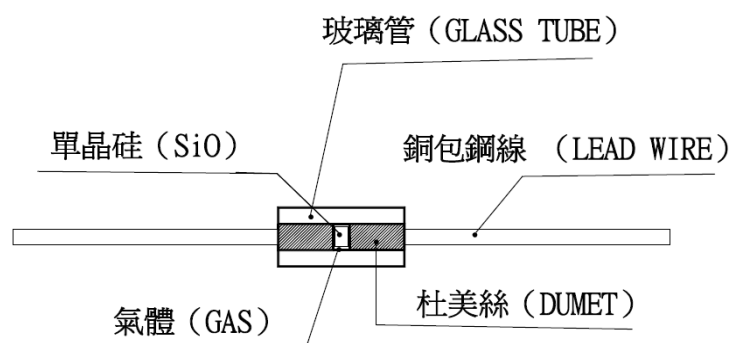
Working temperature range: -25℃ -----+65℃.

(2) 保存溫度範圍-25℃ -----+85℃.

Storing temperature range: -25℃ -----+85℃.

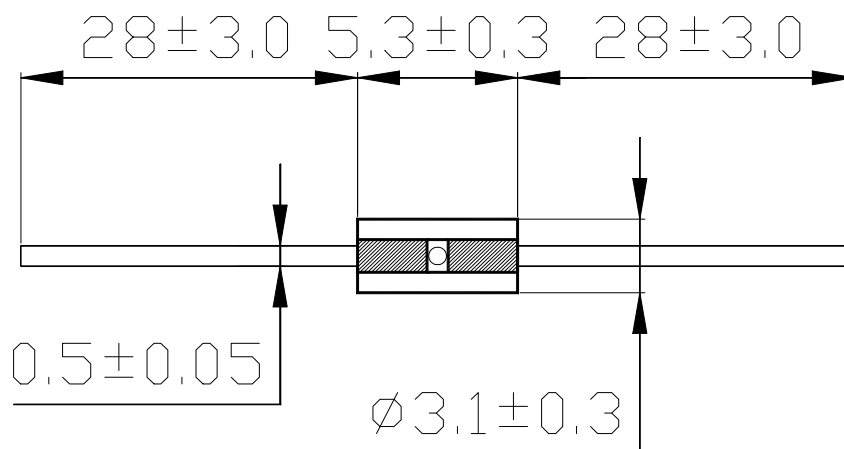
四. 製品結構.

IV. Structure



五. 製品尺寸.

V. Dimension



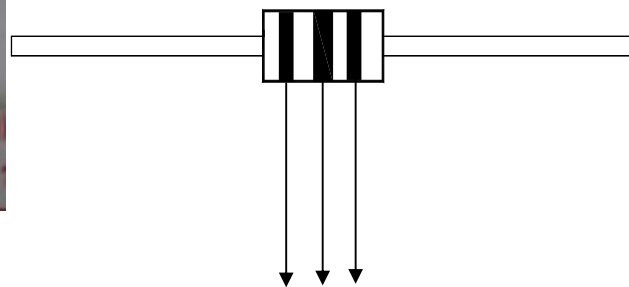
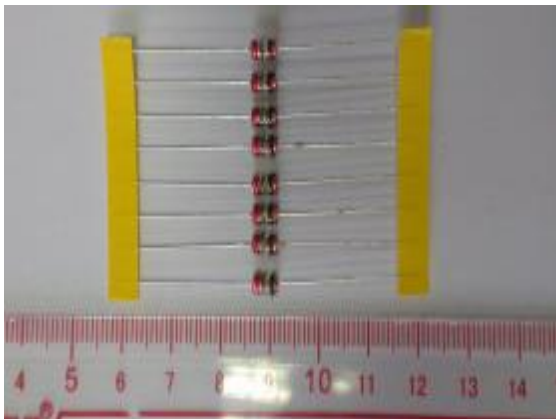
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JSE(3.1*5.3) Series:

Part Number	DC Spark-Over Voltage Vs(V)	Insulation Resistance IR(OHM)/DC V	Electrostatic Capacitance 1KHz-6Vmax C(pF)	Surge current capacity 8/20us	Surge Life Test
JSE152M-T52-3153	1500(1200-1800)	>100M/500V	<1.0	3000A	1kHz-10KV Max (10x700us 6000v 150a 10time)
JSE202M-T52-3153	2000(1600-2400)				
JSE272M-T52-3153	2700(2160-3240)				
JSE302M-T52-3153	3000(2400-3600)				



Color:

Part Number	Color Code1
152M	Black+Yellow+Red
202M	Red+Pruple+Red
272M	Red+Pruple+Red
302M	Orange+Black+Red

{顏色順序爲:黑(0),棕(1),紅(2),橙(3),黃(4),綠(5),藍(6),紫(7),灰(8),白(9)}

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七. 基本特性. (Initial Characteristics)

項 目 Test Item	測 試 條 件 Test Method	規 格 值Specification
直流放電電壓 DC Spark-Over VoltageVs(V)	逐漸地增加測量使用直流電壓,即可知其開始電壓.測定電流爲一毫安與測定時間最大爲一秒(1sec).(1mA) (Add and measure the DC Voltage gradually Maxto get the discharge threshold voltage. The measuring current is 1mA/1 second max.)	依仕様值而定 (It depends on each spec.)
內絕緣電阻 Insulation Resistance	在規定的設定直流電壓下,跨在兩端引線.即測量其內絕緣電阻值. (Measure the insulation resistance of two end of leadwire under the specified DC voltage.)	100MΩ 或大於 100MΩ (100MΩ min.)
靜電電容 Capacitance C(pF)	使用頻率1KHz與小於或等於6V直流電壓之電源.即測量其靜電電容量. Measure the Electrostatic Capacitance under the test condition of 1KHz,DC 6V(max).	1PF或小於1PF (1pF max.)

八.環境試驗.(Enviromental Characteristics)

試 驗 項 目 Test Item	試 驗 方 法 Test Method	性 能Characteristics
耐寒性(依據JIS C0020) Cold Resistance JIS C0020	放置於-40°C±3°C之環境中1000小時後,取出置於常溫常濕中4小時後,檢測直流開始放電電壓,絕緣阻抗,靜電容量及檢查外觀. After -40±3°C (1000hrs) / room temp.,normal humidity(4 hrs) cycle, measure the properties.	滿足各個特性之規格值 Within standard mentioned in Initial Characteristics.
耐熱性(依據JIS C0021) Heat Resistance JIS C0021	放置於125°C±2°C之環境中1000小時後,取出置於常溫常濕中4小時後,檢測直流開始放電電壓,絕緣阻抗,靜電容量及檢查外觀. After 125±2°C (1000hrs) / room temp.,normal humidity(4 hrs) cycle, measure the properties.	滿足各個特性之規格值 Within standard mentioned in Initial Characteristics.
耐濕性(依據JIS C0022) Humidity Resistance JIS C0020	放置於85°C±2°C RH85%之環境中1000小時後,取出置於常溫常濕中4小時後,檢測直流開始放電電壓,絕緣阻抗,靜電容量及檢查外觀. After 85±2°C, 85% RH (1000hrs)/room temp., normal humidity(4hrs)cycle, measure the properties.	滿足各個特性之規格值 Within standard mentioned in Initial Characteristics.
溫度周期(依據JISC0025) Temperature Cycle Test (JIS C0025)	-40°C±3°C (30分)~(常溫3分)~125°C±2°C (30分)爲1周期,重複25次後,取出置於常溫/常濕中4小時後,檢測直流開始放電電壓,絕緣阻抗,靜電容量及檢查外觀. 25 times repetition of cycle -40±3°C (30 Min.),room temp., (4 Min.), 125±2°C (30 Min.),room temp., normal humidity(4hrs) .	滿足各個特性之規格值 Within standard mentioned in Initial Characteristics.

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九. 機構特性.(Mechanical Characteristics)

試驗項目 Test Item	試驗方法 Test Method	結果 Specification
拉力強度(依據 JIS C0051) Pull Strength (JIS C0051)	施加2.5Kgf之荷重於導線約30秒鐘後,檢測直流開始放電電壓,絕緣阻抗,靜電容量及檢查外觀. (Apply 2.5 kgs load approximately 30 seconds, then check for pull-out and breaking of the lead wire.)	滿足各個特性之規格值 (Within standard mentioned in Initial Characteristics.)
彎曲強度 (依據 JIS C0051) Flexure Strength (JIS C0051)	距離導線熔接點根部約3mm處,使用曲率半徑0.75~0.80mm之治具,與軸方向垂直角度,荷0.25Kgf彎曲後回復原狀,反復2次後,檢測直流開始放電電壓,絕緣阻抗,靜電容量及檢查外觀.(Bend the lead wire, with jig which radius is 0.75~0.8mm, at the point of 2mm from the body, under 0.25 kgs load applied at the right angle the direction of the amis and get the bent lead wire back to its original poing after the procedure was repeated 2 times.)	滿足各個特性之規格值 (Within standard mentioned in Initial Characteristics.)

十. 焊錫特性.(Solder Characteristics)

試驗項目 Test Item	試驗方法 Test Method	結果 Specification
焊錫附著性 (依據 JIS C0050 4.6項) Solderability (JIS C0050,4.6)	將沾過助焊劑之導線,自距離導線熔接點根部3mm處起,浸於265±5℃之焊錫液中5秒鐘後,將導線之助焊劑洗淨後,檢查焊錫附著情形.(Apply flux and immerse in molten solder, up to the point of 3mm from the body, for 5 sec. (265℃±5℃). Wash the leadwire and check for soldering adhesion.)	導線須均勻附著90%以上. (Lead wire is evenly covered by solder over 90%.)
焊錫耐熱性 (依據 JIS C0051) Solder Heat (JIS C0051)	將沾過助焊劑之導線,自距離導線熔接點根部2mm處起,浸於265±5℃之焊錫液中10±1秒鐘後,檢測直流開始放電電壓,絕緣阻抗,靜電容量及檢查外觀.(Lead wire is dipped up to the point of 2mm from the body, into 265℃±5℃ solder for 10±1 sec. And measure the properties.)	滿足各特性之規格值. (Within standard mentioned in Initial Characteristics.)

十一. 突波特性.(Surge Characteristics)

試驗項目 Test Item	試驗方法 Test Method	結果 Specification
突波壽命(JSE) Life(JSE)	(100X1000) μ sec-1KV之突波,變換極向各6次,每隔30秒施加於試料24次後,檢測直流開始放電電壓,絕緣阻抗,靜電容量及檢查外觀.(Apply a standard apply a impulse voltage((100X1000) μ sec) of 1KV. Total apply 24 times. Then measure DC spark-over volatage, IR & Capacitance.)	直流開始放電電壓JSE $\Delta V_s/V_s \leq 30\%$ (DC spark-over volatage JSE: $\Delta V_s/V_s \leq 30\%$)
突波壽命(JSE) Life(JSE)	每間隔10秒施加10KV之電壓於1500PF之電容器通過試料,做200次(Apply 10 KV voltage charged in 1500pF condenser and apply the current to the specimen,200 times at 10 seconds of intervals.)	絕緣阻抗:須滿足規定值. 靜電電容:須滿足規定值. 外觀:無影響使用之顯著缺陷(Insulation Resistance & Capacitance to meet the specified value.Appearance: No cracks or failures .)

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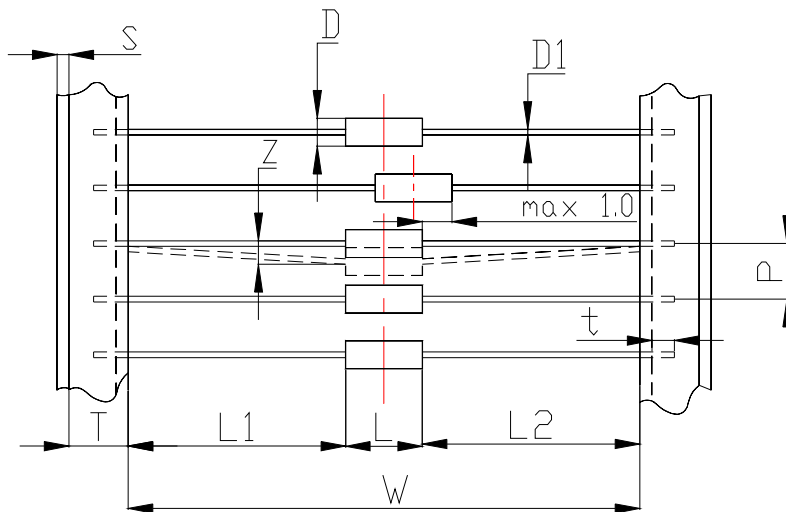
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十三.包裝(Taping)

本規格書含JSE, 系列突波吸收器之包裝.

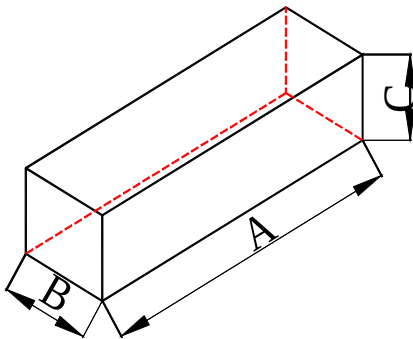
This specification covers the taping of JSE series.



符號 MARK	尺寸 (Dimension) mm
W	52+2.0,-1.0
P	5.0±0.5
T	6.0±1.0
Z	1.2 max
L1-L2	1.0 max
S	0.8 max
t	3.2 max
L	6.7±1.0
D1	Φ0.5±0.0
D	Φ3.1±0.5

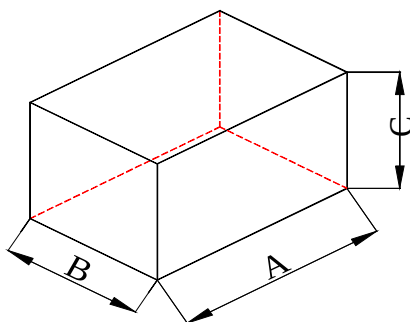
十四.裝箱.(PACKAGE)

(1) 內盒裝(Inner box):



項目 Item	容 量 Description
長 Length	A=255mm
寬 Width	B=75mm
高 Height	C=68mm
數量 Q'ty	1500PCS
表示 Label	製品型號,製造LOT NO. Indicate Part No.&Lot No.
包裝 Package	內盒包裝有上,下墊紙板 There are upper and bottom board 用來保護製品不受損害 protect the parts from damage

(2) 外盒裝(Carton):



項目 Item	容 量 Description
長 Length	A=390mm
寬 Width	B=270mm
高 Height	C=290mm
數量 Q'ty	30000PCS