# JIEJIE MICROELECTRONICS CO., LTD

## J5GxxxM3SF Gas Discharge Tube

## FEATURE

- ♦ Eliminates small size design EIA 7.6 $\times$ 5.0 $\times$ 5.0mm.
- $\diamond$  Current handling capability 5,000A@8/20µs.
- $\diamond$  Low capacitance and insertion loss.
- ♦ Fast response and long service life.
- ♦ Reliable to protect electrostatic surge.
- ♦ Moisture sensitivity level: Level 1.
- ♦ Storage and operating temperature  $-40 \sim +125^{\circ}$ C.

## APPLICATION INFORMATION

- ♦ Repeaters, modems.
- $\diamond$  Telephone interface, line cards.
- ♦ Data communication equipment.
- ♦ Line test equipment.

Part number	DC breakdown Tolerance		Impulse spark-over	Impulse discharge	Insulation resistance		Co	Marking
	voltage 100V/s(V)	of Vs	voltage 1KV/µs(V)	current 8/20µs(A)	GΩ	DC(V)	(1MHz)	code
J5G091M3SF	90	±20%	≤700	5000	≥1	50	≤1pF	3R90
J5G151M3SF	150	±20%	≤750	5000	≥1	50	≤1pF	3R150
J5G231M3SF	230	±20%	≤850	5000	≥1	100	≤1pF	3R230
J5G421M3SF	420	±20%	≤950	5000	≥1	250	≤1pF	3R420
J5G471M3SF	470	±20%	≤1000	5000	≥1	250	≤1pF	3R470
J5G601M3SF	600	±20%	≤1050	5000	≥1	250	≤1pF	3R600

#### **ELECTRICAL CHARACTERISTICS**

1. The parameters of all tested by ITU-T K12.

2. Total Impulse discharge current 5,000A@ 8/20µs by IEC 61000-4-5, 10 shots.

3. The capacitance is tested by 1MHz@DC=0.5V.

4. The V-T waveform of DCBV and IPBV mus lie between the shades.



Exterior



Schematic symbol





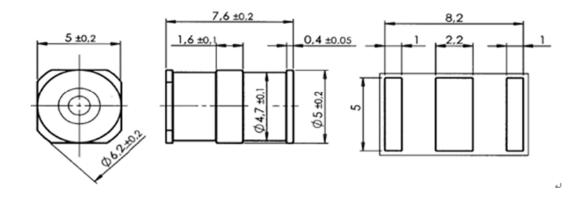
### PART NUMBERING SYSTEM

<u>J5G</u>	<u>091</u>	M	<u>3S</u>	<u>F</u>
(1)	(2)	(3)	(4)	(5)

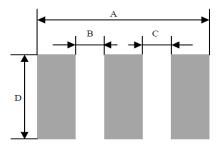
(1)JieJie 5KA gas discharge tube

- (2) DC breakdown voltage, e.g.,  $91=9 \times 10^{1}=90V$
- (3) Tolerance is DC breakdown voltage, M=+-20%, N=+-30%
- (4) 3-electrod SMD
- (5) Dimension in  $7.6 \times 5.0 \times 5.0$  (mm)

## **PRODUCT DIMENSIONS (unit: mm)**



#### **RECOMMENDED SOLDERING PAD**



REF	mm	inch
А	9.6	0.378
В	1.5	0.059
С	1.5	0.059
D	5.0	0.197

tp 🛌

Critical Zone

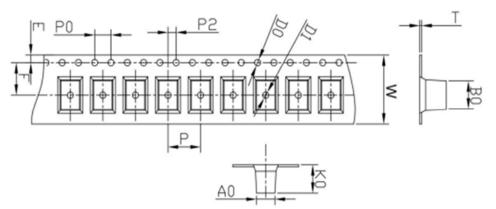
Ramp-dowr

Time⇔

## **REFLOW PROFILE**

Reflow Condition		Pb-Free assembly (see figure at right)	
	-Temperature Min (T <sub>s(min)</sub> )	+150℃	
Pre Heat	-Temperature Max(T <sub>s(max)</sub> )	<b>+200</b> ℃	
Ticat	-Time (Min to Max) (ts)	60-180 secs.	Reflow condition
Average ramp up rate (Liquidus Temp (T∟)to peak)		3℃/sec. Max	TPRamp-up
T <sub>s(max)</sub> to	T <sub>L</sub> - Ramp-up Rate	3℃/sec. Max	TS(max)
Deflect	-Temperature(T∟)(Liquidus)	+217℃	Preheat
Reliow	-Temperature(t∟)	60-150 secs.	TS(min)
Peak Ten	ηρ (T <sub>p</sub> )	<b>+260(+0/-5)</b> ℃	25 time to peak temperatue
Time within 5 $^\circ \!\!\!\! ^\circ \!\!\! ^\circ \!\! ^\circ \!\! ^\circ \!\! ^\circ \!\!\! ^\circ \!\! ^\circ \!\!\! ^\circ \!\! ^\circ \!\!\! ^\circ \!\! ^\circ \!\!\! ^\circ \!\!\! ^\circ \!\!\! ^\circ \!\! ^\circ \!\!\! ^\circ \!\! ^\circ \!\! ^\circ \!\! ^\circ \!\!\! ^\circ \!\! ^\circ \!\!\! ^\circ \!\!\! ^\circ \!\!\! ^\circ \!\!\! ^\circ \!\!\! ^\circ \!\! ^\circ \!\!$		~10 secs.	(125 C to peak)
Ramp-down Rate		6℃/sec. Max	
Time 25 $^\circ\!\!\!\!\!^\circ$ to Peak Temp (T <sub>P</sub> )		8 min. Max	
Do not exceed		<b>+260</b> ℃	
Time with Ramp-do Time 25°0	-Temperature( $t_{L}$ ) np ( $T_{P}$ ) nin 5°C of actual Peak Temp ( $t_{P}$ ) wn Rate C to Peak Temp ( $T_{P}$ )	60-150 secs. +260(+0/-5)℃ ~10 secs. 6℃/sec. Max 8 min. Max	

## PACKAGE REEL INFORMATION



	w	AO	BO	K0	E	F	Ρ	P0	P2	D0	D1	т
DATA	16.00	5.35	7.95	5.35	1.75	7.5	8.00	4.00	2.00	1.50	1.50	0.40
	±0.30	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.05

## PACKAGING

Part No.	Reel Quantity (pcs)	Per Carton (pcs)
J5GxxxM3SF	1,000	20,000

#### MARKING CODE

Part Number	Marking Code		
J5GxxxM3SF	3R 90		

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