

# ESJC13

(9kV/450mA, 12kV/350mA)

## HIGH VOLTAGE DIODE

ESJC13 is high reliability resin molded type high voltage diode in small size package which is sealed (a multilayered mesa type silicon chip) by epoxy resin.

### Features

- Low VF
- High Surge proof resistivity
- High reliability .

### Applications

- Rectification for Microwave oven high voltage power supply

### Maximum Ratings and Characteristics

- Absolute Maximum Ratings

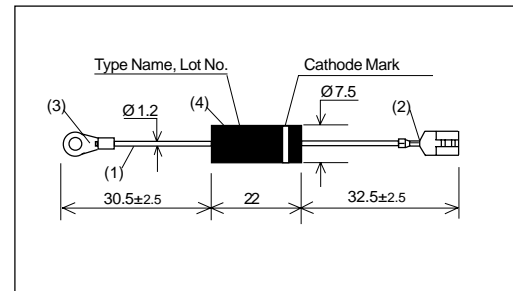
Items	Symbols	Conditions	ESJC13		Units
			-09B	-12B	
Repetitive Peak Reverse Voltage	$V_{RRM}$		9	12	kV
Average Forward Current	$I_o$	50HzSine half-wave average value. $T_a \leq 60^\circ\text{C}^*$	450	350	mA
Non-repetitive Peak Reverse Current	$I_{RSM}$	$W_p=1\text{mS}$ .Rectangular-wave. One-shot. $T_a=25^\circ\text{C}$	100		mA
Non-repetitive Peak Forward Current	$I_{FSM}$	50HzSine half-wave peak value. One-shot. $T_a=25^\circ\text{C}$	30		A
Allowable Junction Temperature	$T_j$		130		$^\circ\text{C}$
Storage Temperature Range	$T_g$		-40 to +130		$^\circ\text{C}$

\* Cooling Requirement: Cathode terminal is fastened to radiating fin  
That size is more than 50mm\*~50mm\*~0.6mm Wind-cooled velocity is more than 0.5m/s.

- Electrical Characteristics ( $T_a=25^\circ\text{C}$  Unless otherwise specified)

Items	Symbols	Conditions	ESJC13		Units
			-09B	-12B	
Maximum Forward Voltage Drop	$V_F$	$I_F=350\text{mA}$	8	10	V
Maximum Reverse Current	$I_R$	$V_R=12\text{kV}$	5		$\mu\text{A}$
Minimum Avalanche Breakdown Voltage	$V_Z$	$I_Z=100\mu\text{A}$	9.5	12.5	kV

### Outline Drawings



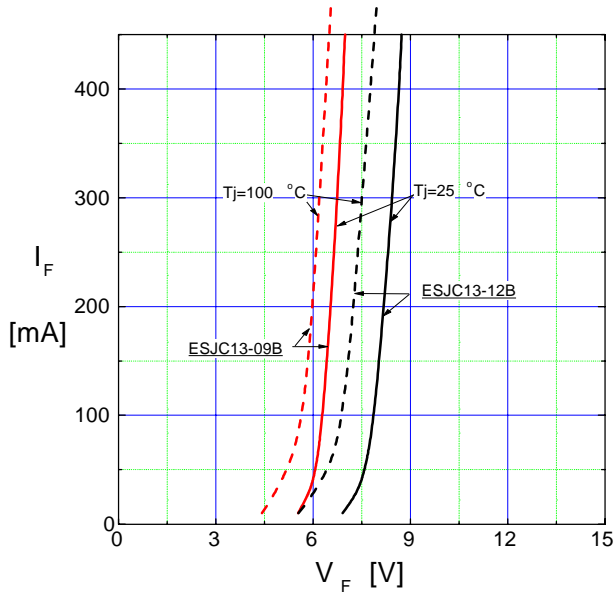
No.	Part name	Material and type name
1	Lead wire	Ag plated Cu wire
2	Anode terminal	Flat quick-connect terminal CSS-66325-F (NITIFU TERMINAL INDUSTRIES Co.,LTD) or Equivalent
3	Cathode terminal	Crimp-type terminal lugs for copper conductor 1.25-4M
4	Molding resin	Epoxy resin UL94V-0

### Cathode Mark

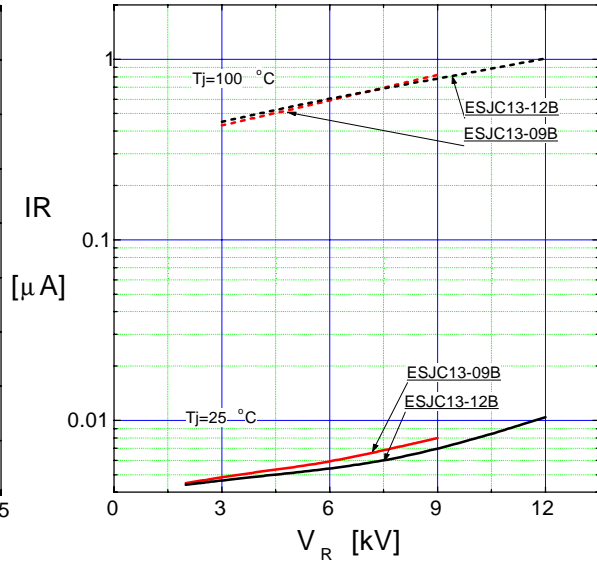
Type	Mark
ESJA13-09B	■ ■ ■ ■ ■ ■
ESJA13-12B	◆ ◆ ◆ ◆ ◆ ◆

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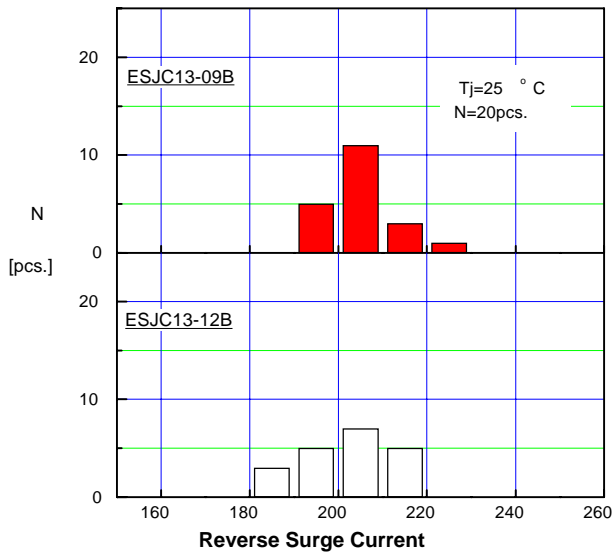
## Characteristics



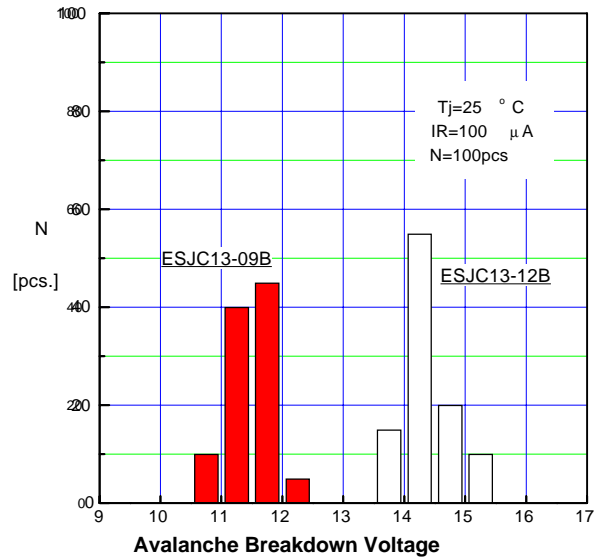
Forward Characteristics



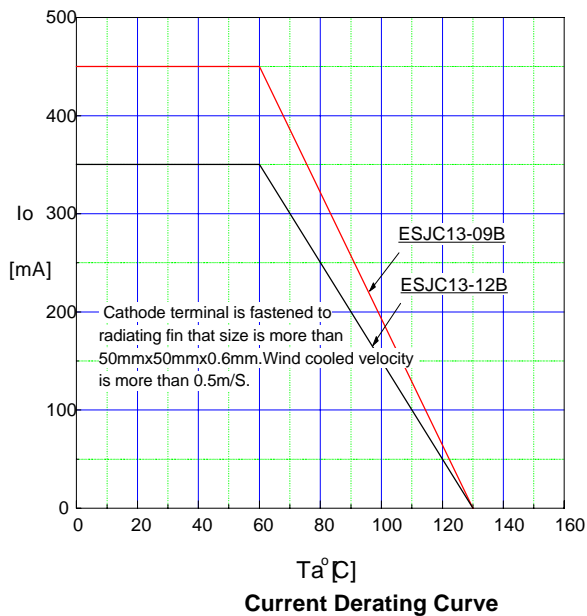
Reverse Characteristics



Reverse Surge Current



Avalanche Breakdown Voltage



Current Derating Curve