

# ESJC37 (5kV/540mA, 8kV/410mA, 10kV/310mA)

## HIGH VOLTAGE DIODE

ESJC37 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  $V_F$
- High surge proof resistivity
- High reliability

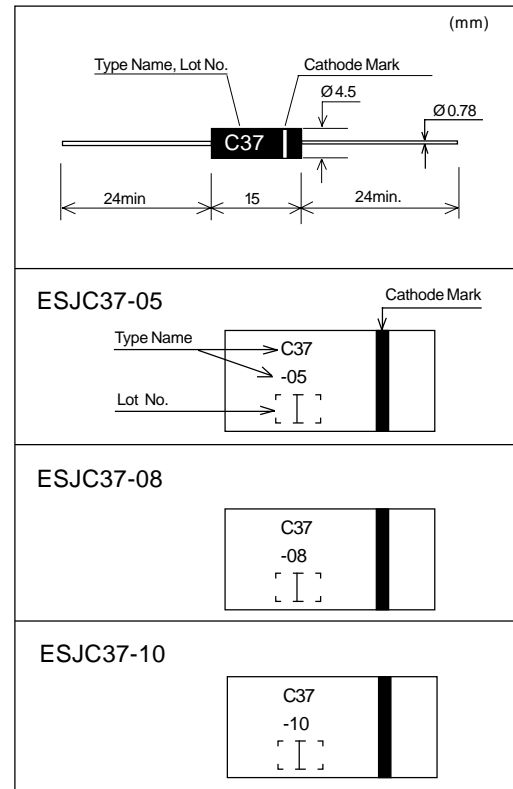
### Applications

- Rectification for microwave oven—high voltage power supply

### Maximum Ratings and Characteristics

- Absolute Maximum Ratings

### Outline Drawings



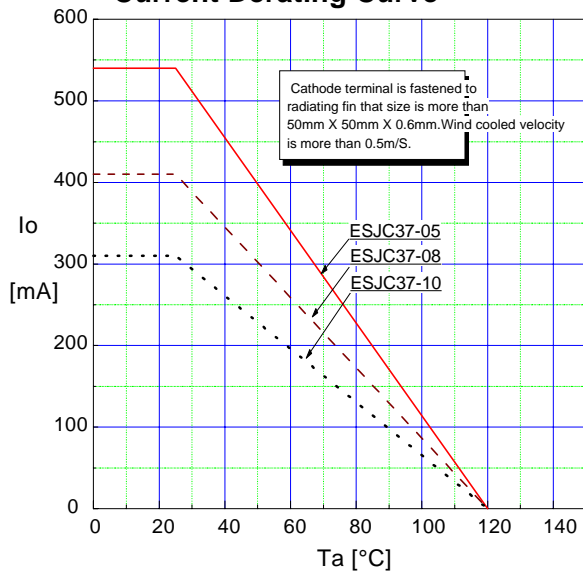
Items	Symbols	Conditions	ESJC37			Units
			-05	-08	-10	
Repetitive peak reverse voltage	$V_{RRM}$		5	8	10	kV <sub>peak</sub>
Average forward current	$I_o$	50Hz Sine half-wave average value. $T_{oil} = 25^\circ\text{C}$	540	410	310	mA
Non-repetitive peak forward current	$I_{surge}$	50Hz Sine half-wave peak value, One-shot. $T_a = 25^\circ\text{C}$	15	10	10	A <sub>peak</sub>
Allowable junction temperature	$T_j$		120			$^\circ\text{C}$
Storage temperature range	$T_{stg}$		-40 to +120			$^\circ\text{C}$
Case temperature	$T_c$		110			$^\circ\text{C}$

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

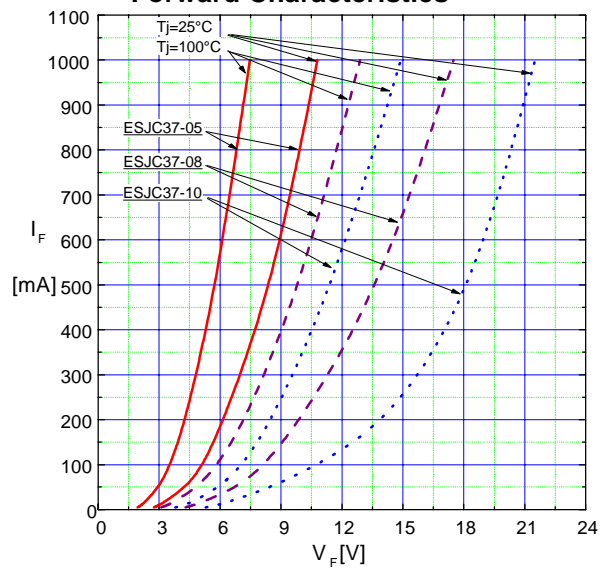
Items	Symbols	Conditions	ESJC37			Units
			-05	-08	-10	
Maximum forward voltage drop	$V_F$	$I_F = 1\text{A}$	13	20	25	V
Maximum reverse current	$I_{R1}$	$V_R = 5\text{kV}(-05), 8\text{kV}(-08), 10\text{kV}(-10)$ $T_a = 25^\circ\text{C}$	2			$\mu\text{A}$
	$I_{R2}$	$V_R = 5\text{kV}(-05), 8\text{kV}(-08), 10\text{kV}(-10)$ $T_a = 100^\circ\text{C}$	10			$\mu\text{A}$
Reverse recovery time	$t_{rr}$	$I_F = 0.1\text{A}$ $I_R = 0.1\text{A}$ 90%	0.3			$\mu\text{s}$
Minimum avalanche breakdown voltage	$V_Z$	$I_Z = 100\mu\text{A}$	5.2	8.4	10.5	kV

## Characteristics

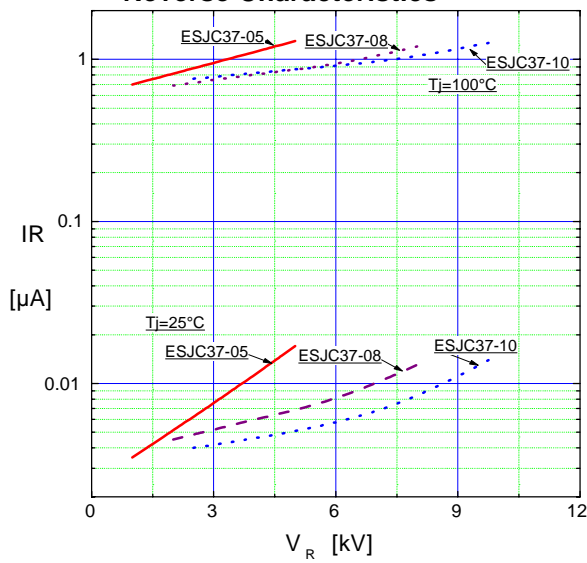
### Current Derating Curve



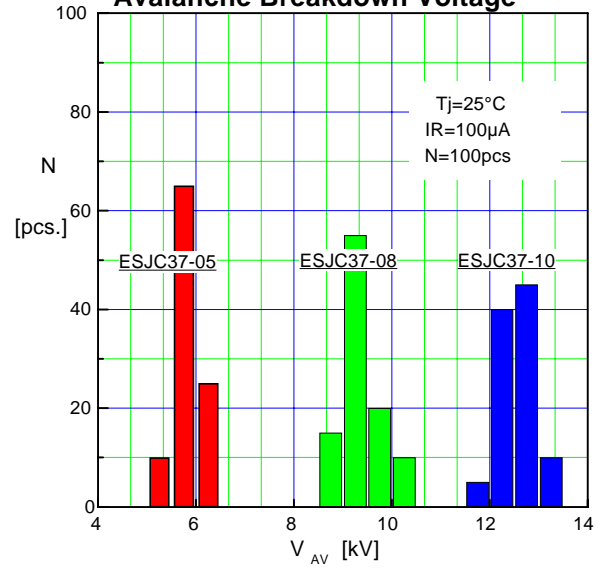
### Forward Characteristics



### Reverse Characteristics



### Avalanche Breakdown Voltage



### Reverse Recovery Time

