

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

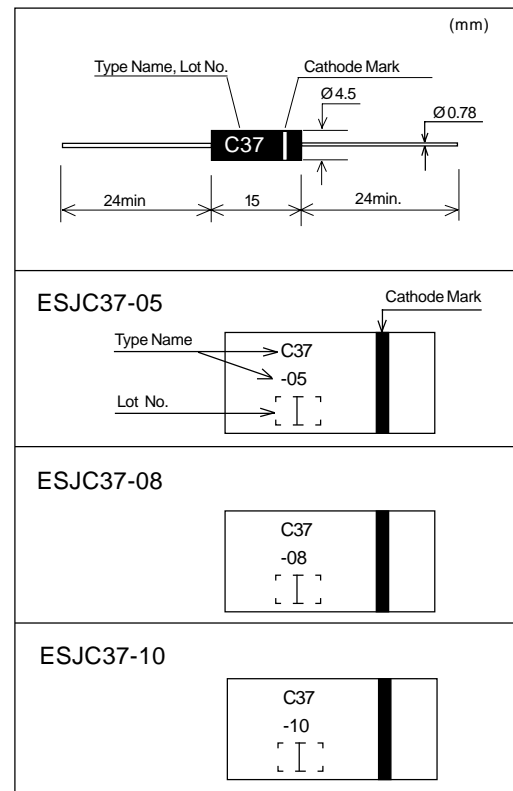
Applications

- Rectification for microwave oven—high voltage power supply

Maximum Ratings and Characteristics

- Absolute Maximum Ratings

Outline Drawings



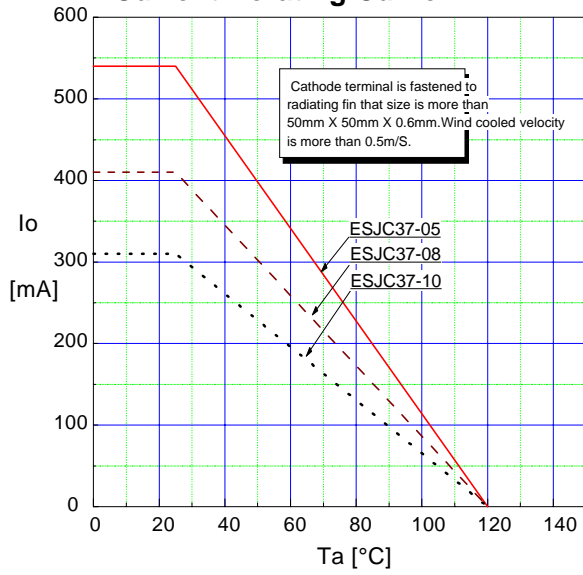
Items	Symbols	Conditions	ESJC37			Units
			-05	-08	-10	
Repetitive peak reverse voltage	V_{RRM}		5	8	10	kV _{peak}
Average forward current	I_o	50Hz Sine half-wave average value. $T_{oil} = 25^\circ\text{C}$	540	410	310	mA
Non-repetitive peak forward current	I_{surge}	50Hz Sine half-wave peak value, One-shot. $T_a = 25^\circ\text{C}$	15	10	10	A _{peak}
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)

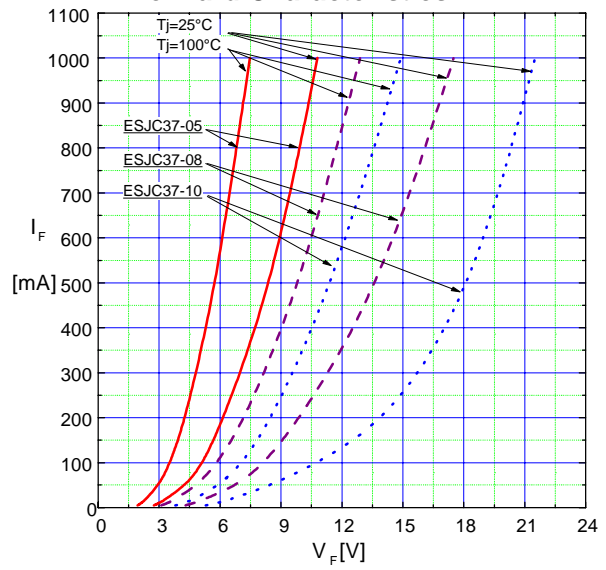
Items	Symbols	Conditions	ESJC37			Units
			-05	-08	-10	
Maximum forward voltage drop	V_F	$I_F = 1\text{A}$	13	20	25	V
Maximum reverse current	I_{R1}	$V_R = 5\text{kV}(-05), 8\text{kV}(-08), 10\text{kV}(-10)$ $T_a = 25^\circ\text{C}$	2			μA
	I_{R2}	$V_R = 5\text{kV}(-05), 8\text{kV}(-08), 10\text{kV}(-10)$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

Characteristics

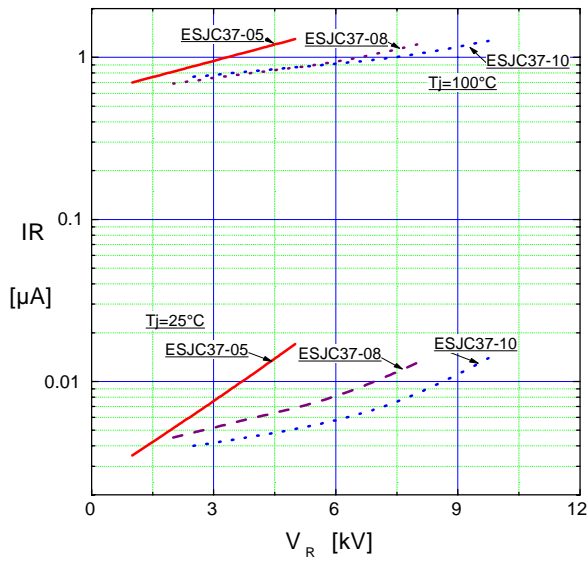
Current Derating Curve



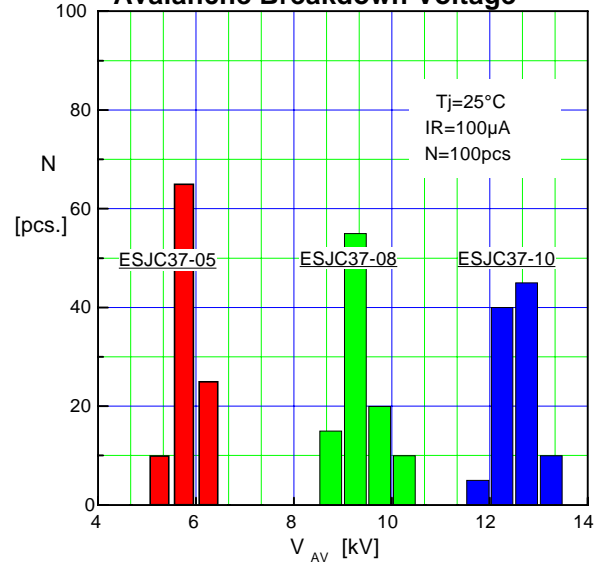
Forward Characteristics



Reverse Characteristics



Avalanche Breakdown Voltage



Reverse Recovery Time

