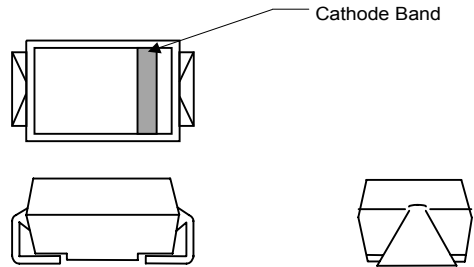


ES1D - ES1J

DO-214AC
(SMA) (High Profile)

Features

- For surface mount applications.
- Glass passivated junction.
- Low profile package.
- Easy pick and place.
- Built-in strain relief.
- Superfast recovery times for high efficiency.



1.0 Ampere Superfast Rectifiers

Absolute Maximum Ratings* T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
I _O	Average Rectified Current @ T _A = 120°C	1.0	A
i _{f(surge)}	Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	30	A
P _D	Total Device Dissipation Derate above 25°C	1.47 11.76	W mW/°C
R _{θJA}	Thermal Resistance, Junction to Ambient**	85	°C/W
R _{θJL}	Thermal Resistance, Junction to Lead**	35	°C/W
T _{stg}	Storage Temperature Range	-50 to +150	°C
T _J	Operating Junction Temperature	-50 to +150	°C

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

**Device mounted on FR-4 PCB 0.013 mm.

Electrical Characteristics T_A = 25°C unless otherwise noted

Parameter	Device				Units
	1D	1E	1G	1J	
Peak Repetitive Reverse Voltage	200	300	400	600	V
Maximum RMS Voltage	140	210	280	420	V
DC Reverse Voltage (Rated V _R)	200	300	400	600	V
Maximum Reverse Current @ rated V _R T _A = 25°C T _A = 100°C					50 100 μA μA
Maximum Reverse Recovery Time I _F = 0.5 A, I _R = 1.0 A, I _{RR} = 0.25 A					35 nS
Maximum Forward Voltage @ 1.0 A					1.70 V
Typical Junction Capacitance V _R = 4.0 V, f = 1.0 MHz					8.0 pF

Typical Characteristics

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

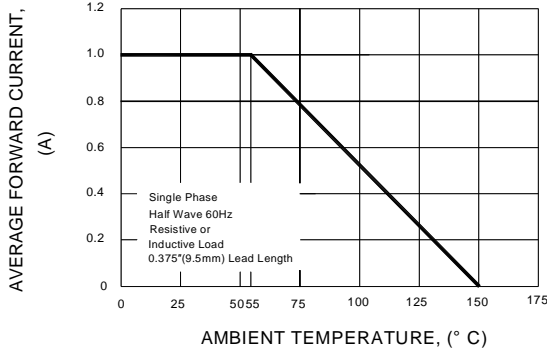


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

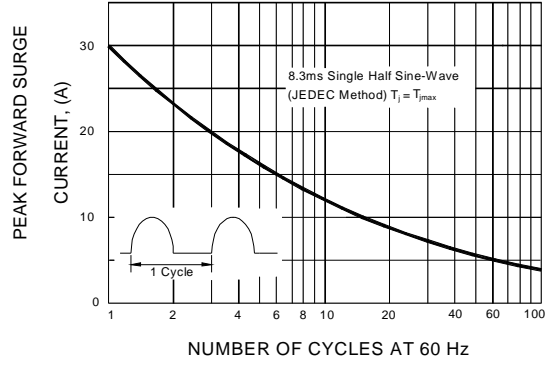


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

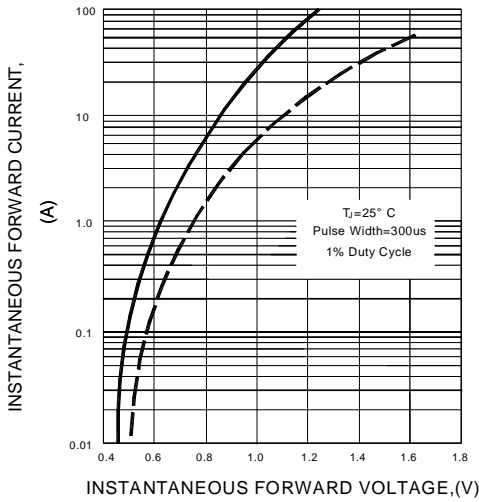


FIG.4-TYPICAL REVERSE CHARACTERISTICS

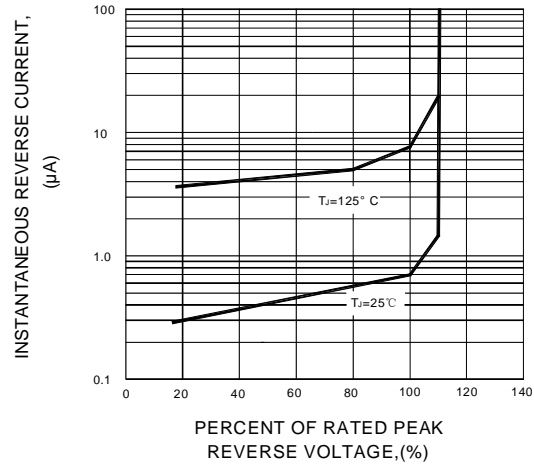


FIG.5-TYPICAL JUNCTION CAPACITANCE

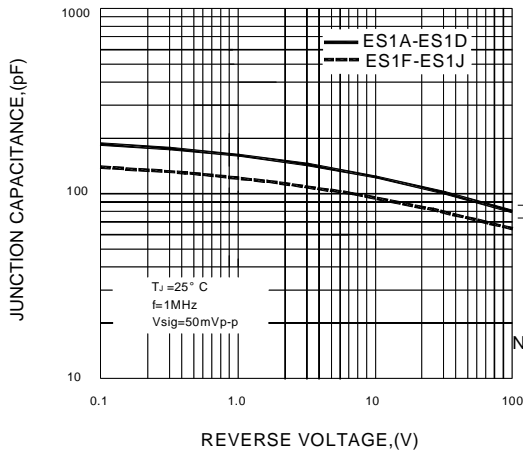
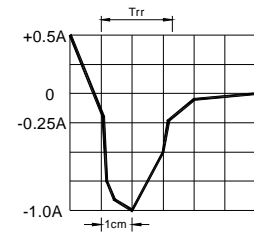
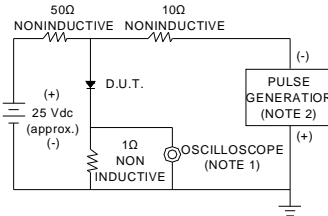


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



- NOTES: 1. Rise Time=7ns max. Input Impedance= 1 magohm. 22pF
 2. Rise time=10ns max. Source Impedance= 50 ohms

SET TIME BASE 50/100ns/cm