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# ES1F - ES1J

## Fast Rectifiers

### 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.



**SMA(DO-214AC)**  
Color Band Denotes Cathode

### Absolute Maximum Ratings \* T<sub>a</sub> = 25°C unless otherwise noted

Symbol	Parameter	Value				Units
		ES1F	ES1G	ES1H	ES1J	
V <sub>RRM</sub>	Maximum Repetitive Reverse Voltage	300	400	500	600	V
I <sub>F(AV)</sub>	Average Rectified Forward Current	1.0				A
I <sub>FSM</sub>	Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave (JEDEC method)	30				A
T <sub>J</sub>	Junction Temperature	150				°C
T <sub>STG</sub>	Storage Temperature Range	-55 to 150				°C
P <sub>D</sub>	Power Dissipation	1.47				W

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

### Thermal Characteristics

Symbol	Parameter	Value	Units
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient *	85	°C/W
R <sub>θJL</sub>	Thermal Resistance, Junction to Lead *	35	°C/W

\* P. C. B mounted on 0.2" x 0.2" (5 x 5 mm) copper Pad Area.

### Electrical Characteristics T<sub>C</sub> = 25°C unless otherwise noted

Symbol	Parameter	Value		Units
V <sub>F</sub>	Maximum Forward Voltage @ I <sub>F</sub> = 1.0 A	1.3	1.7	V
T <sub>rr</sub>	Maximum Reverse Recovery Time I <sub>F</sub> = 0.5 A, I <sub>R</sub> = 1.0 A, I <sub>RR</sub> = 0.25 A	35		ns
I <sub>R</sub>	Maximum Reverse Current @ rated V <sub>R</sub> <small>T<sub>A</sub> = 25°C T<sub>A</sub> = 100°C</small>	5.0	100	uA
C <sub>j</sub>	Typical Junction Capacitance V <sub>R</sub> = 4.0 V, f = 1.0 MHz	10.0	8.0	pF

# Typical Performance Characteristics

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

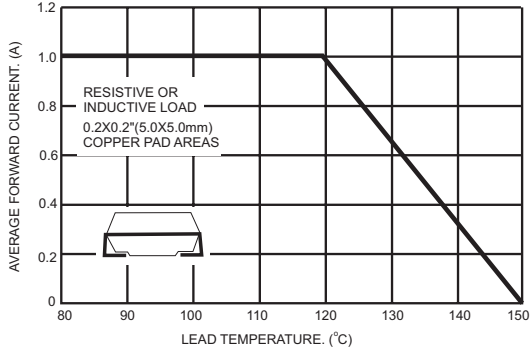


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

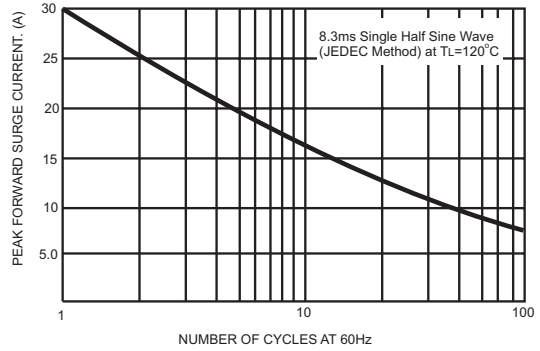


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

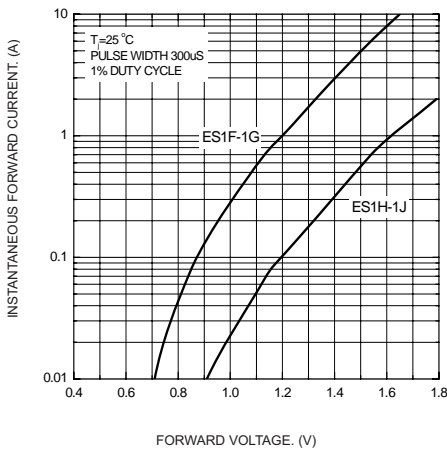


FIG.4- TYPICAL REVERSE CHARACTERISTICS

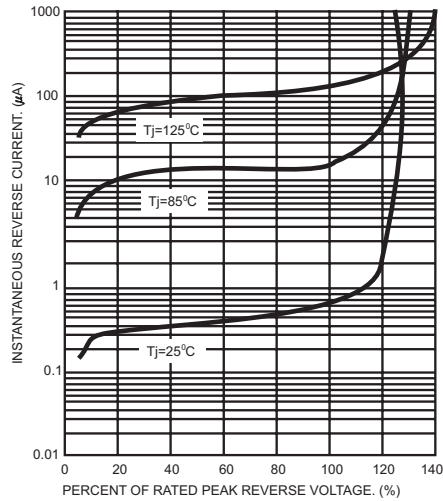
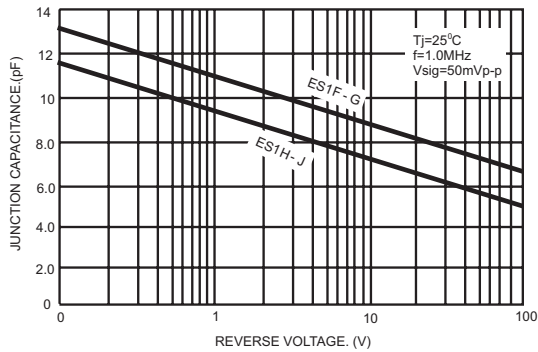
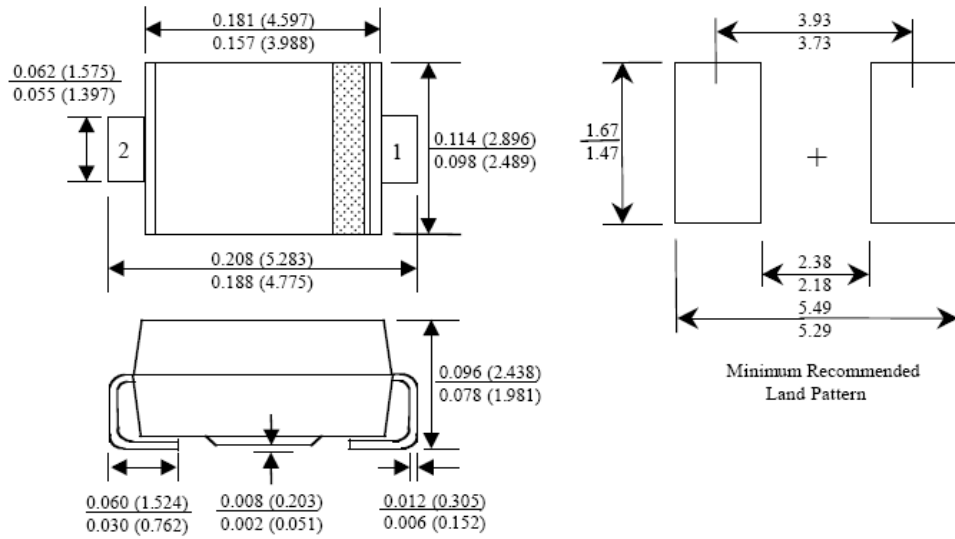


FIG.5- TYPICAL JUNCTION CAPACITANCE



Package Dimensions

SMA / DO - 214AC




Dimensions in Millimeters



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