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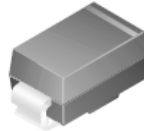


ES1F - ES1J

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_a = 25°C unless otherwise noted

| Symbol | Parameter | Value | | | | Units |
|--------------------|--|------------|------|------|------|-------|
| | | ES1F | ES1G | ES1H | ES1J | |
| V _{RRM} | Maximum Repetitive Reverse Voltage | 300 | 400 | 500 | 600 | V |
| I _{F(AV)} | Average Rectified Forward Current | 1.0 | | | | A |
| I _{FSM} | Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave (JEDEC method) | 30 | | | | A |
| T _J | Junction Temperature | 150 | | | | °C |
| T _{STG} | Storage Temperature Range | -55 to 150 | | | | °C |
| P _D | 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 _{θJA} | Thermal Resistance, Junction to Ambient * | 85 | °C/W |
| R _{θJL} | 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_C = 25°C unless otherwise noted

| Symbol | Parameter | Value | | Units |
|-----------------|--|-------|-----|-------|
| V _F | Maximum Forward Voltage @ I _F = 1.0 A | 1.3 | 1.7 | V |
| T _{rr} | Maximum Reverse Recovery Time I _F = 0.5 A, I _R = 1.0 A, I _{RR} = 0.25 A | 35 | | ns |
| I _R | Maximum Reverse Current @ rated V _R <small>T_A = 25°C T_A = 100°C</small> | 5.0 | 100 | uA |
| C _j | Typical Junction Capacitance V _R = 4.0 V, f = 1.0 MHz | 10.0 | 8.0 | pF |

Typical Performance Characteristics

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

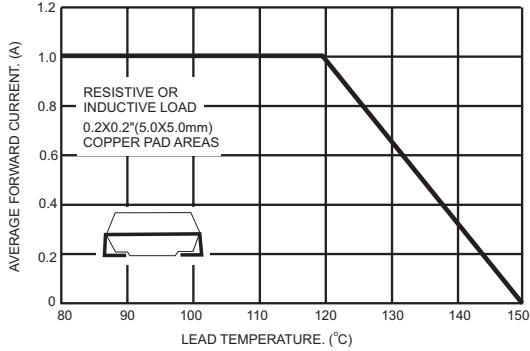


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

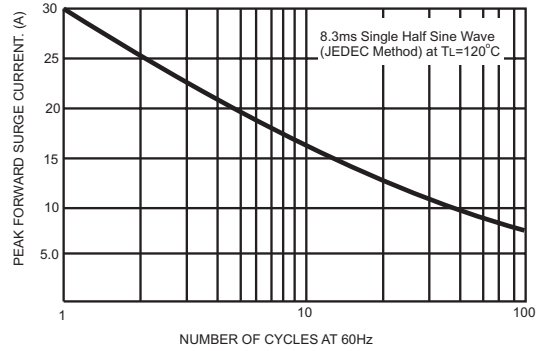


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

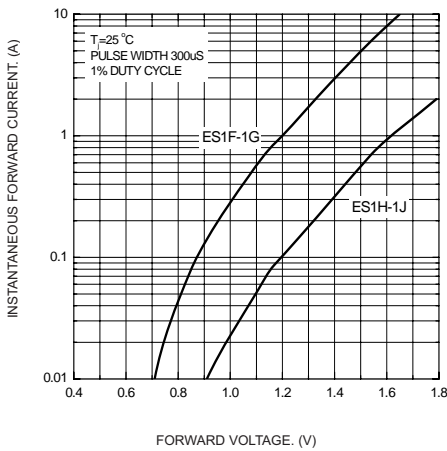


FIG.4- TYPICAL REVERSE CHARACTERISTICS

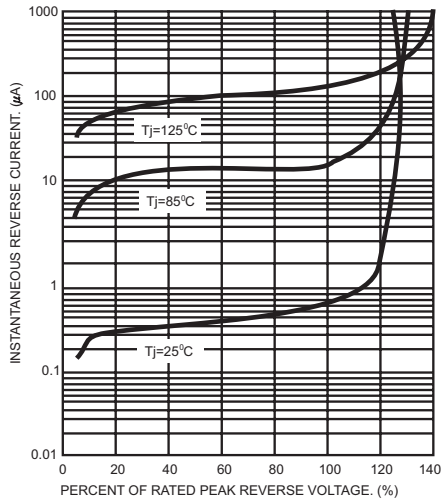
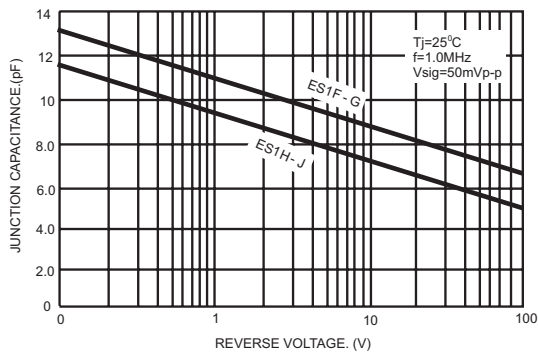
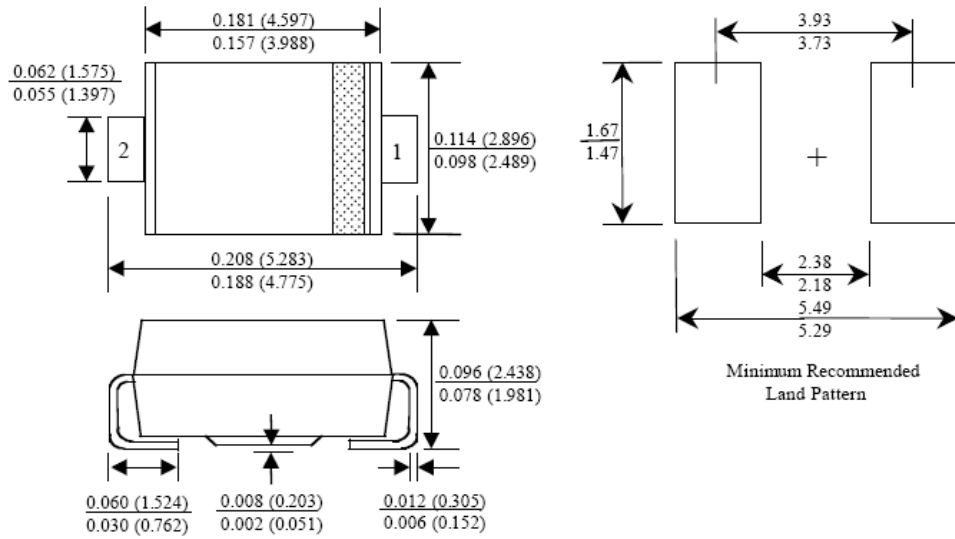


FIG.5- TYPICAL JUNCTION CAPACITANCE



Package Dimensions

SMA / DO - 214AC



Dimensions in Millimeters



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|--------------------------|------------------------|--|
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