

MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

Product data sheet



SMA

FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Super fast switching for high efficiency
- ◆ Low reverse leakage
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C/10 seconds at terminals

MECHANICAL DATA

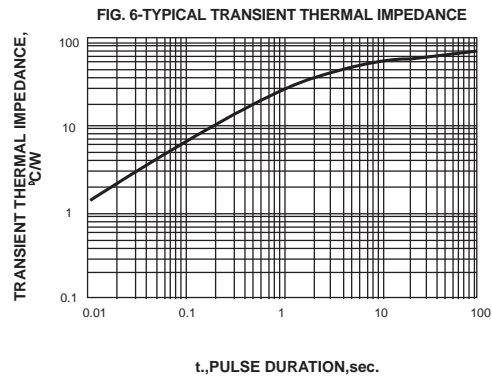
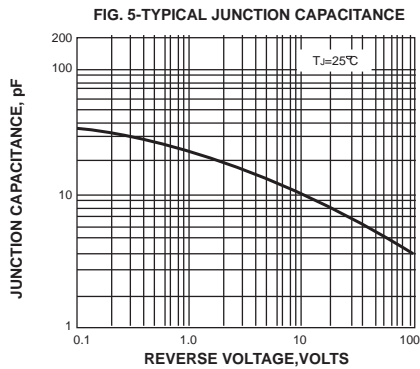
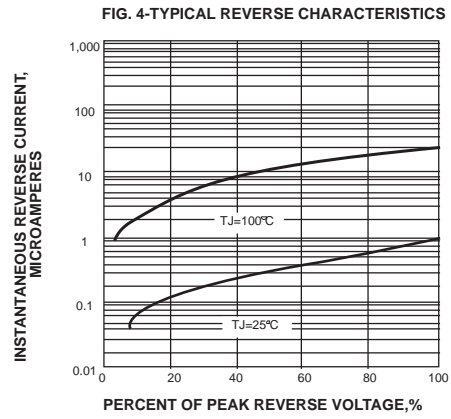
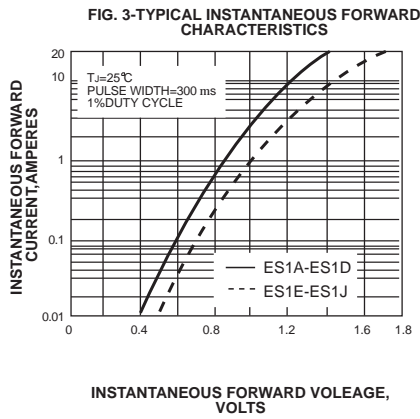
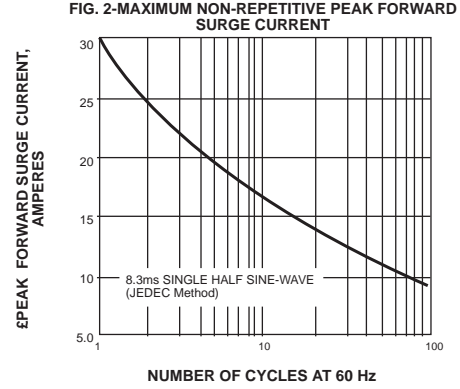
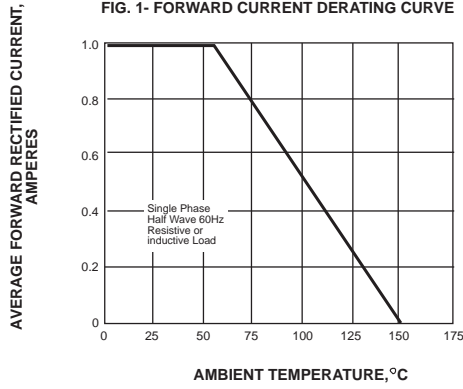
- ◆ **Case:** JEDEC DO-214AC molded plastic body
- ◆ **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- ◆ **Polarity:** Color band denotes cathode end
- ◆ **Mounting Position:** Any
- ◆ **Weight:** 0.003 ounce, 0.093 grams
0.004 ounce, 0.111 grams SMA(H)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

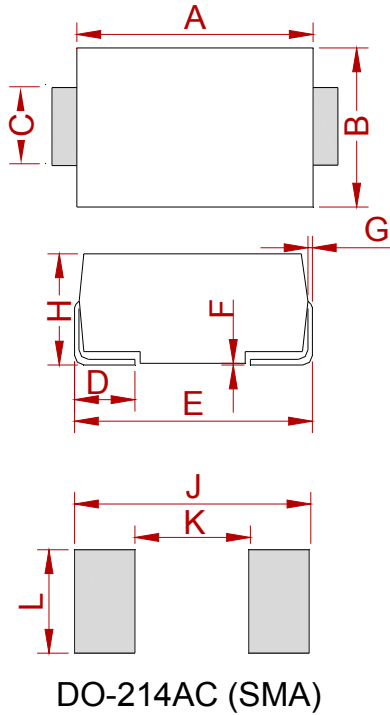
Ratings at 25°C ambient temperature unless otherwise specified.
Single phase half wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| | SYMBOLS | ES1A | ES1B | ES1C | ES1D | ES1E | ES1G | ES1J | UNITS | |
|---|----------------|-------------|------|------|------|------|------|------|-------|------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 150 | 200 | 300 | 400 | 600 | VOLTS | |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 105 | 140 | 210 | 280 | 420 | VOLTS | |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 150 | 200 | 300 | 400 | 600 | VOLTS | |
| Maximum average forward rectified current at $T_L=55^\circ\text{C}$ | $I_{(AV)}$ | 1.0 | | | | | | | Amp | |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 30.0 | | | | | | | Amps | |
| Maximum instantaneous forward voltage at 1.0A | V_F | 0.95 | | | | 1.25 | | | Volts | |
| Maximum DC reverse current at rated DC blocking voltage | I_R | 5.0 | | | | 50.0 | | | | uA |
| Maximum reverse recovery time (NOTE 1) | t_{rr} | 35 | | | | | | | | ns |
| Typical junction capacitance (NOTE 2) | C_J | 15.0 | | | | | | | | pF |
| Typical thermal resistance (NOTE 3) | R_{qJA} | 60.0 | | | | | | | | °C/W |
| Operating junction and storage temperature range | T_J, T_{STG} | -65 to +150 | | | | | | | °C | |

Note: 1. Reverse recovery condition $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 3. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas



PACKAGE MECHANICAL DATA



| Ref. | Dimensions | | | |
|------|-------------|-------|--------|-------|
| | Millimeters | | Inches | |
| | Min. | Max. | Min. | Max. |
| A | 4.25 | 4.65 | 0.167 | 0.183 |
| B | 2.50 | 2.90 | 0.098 | 0.114 |
| C | 1.35 | 1.65 | 0.053 | 0.065 |
| D | 0.76 | 1.52 | 0.030 | 0.060 |
| E | 4.93 | 5.28 | 0.194 | 0.208 |
| F | 0.051 | 0.203 | 0.002 | 0.008 |
| G | 0.15 | 0.31 | 0.006 | 0.012 |
| H | 1.98 | 2.41 | 0.078 | 0.095 |
| J | 6.50 | | 0.256 | |
| K | | 2.30 | | 0.090 |
| L | 1.70 | | 0.067 | |

REEL SPECIFICATION

| P/N | PKG | QTY |
|----------------|-----|------|
| ES1A THRU ES1J | SMA | 2000 |

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