

Surface Mount Schottky Barrier

FEATURES

- Very low profile - typical height of 0.68mm
- Low power loss, high efficiency
- Ideal for automated placement
- Moisture sensitivity level: level 1, per J-STD-020
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



Micro SMA



MECHANICAL DATA

Case: Micro SMA

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - Green compound (halogen-free)

Base P/N with prefix "H" on packing code - AEC-Q101 qualified

Terminal: Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

with prefix "H" on packing code meet JESD 201 class 2 whisker test

Polarity: Indicated by cathode band

Weight: 0.006 g (approximately)

| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted) | | | | | | |
|--|--------------------|-------------|-------|-------|------|------|
| PARAMETER | SYMBOL | SS13M | SS14M | SS16M | | UNIT |
| Marking code | | A | B | C | | |
| Maximum repetitive peak reverse voltage | V _{RRM} | 30 | 40 | 60 | | V |
| Maximum average forward rectified current | I _{F(AV)} | 1 | | | | A |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load | I _{FSM} | 25 | | | | A |
| Maximum instantaneous forward voltage (Note 1) @ 0.5A / T _J =25 °C @ 0.5A / T _J =125 °C @ 1.0A / T _J =25 °C @ 1.0A / T _J =125 °C | V _F | TYP | MAX | TYP | MAX | V |
| | | 0.45 | - | 0.51 | - | |
| | | 0.35 | - | 0.46 | - | |
| | | 0.52 | 0.55 | 0.64 | 0.68 | |
| | | 0.46 | 0.50 | 0.57 | 0.60 | |
| Maximum reverse current @ rated VR @ T _J =25 °C @ T _J =125 °C @ T _J =150 °C | I _R | TYP | MAX | TYP | MAX | |
| | | 5 | 50 | 5 | 50 | μA |
| | | 3 | 10 | 3 | 10 | mA |
| | | 5.3 | - | 6.7 | - | mA |
| Typical junction capacitance (Note 2) | C _j | 50 | | 40 | | pF |
| Typical thermal resistance | R _{θJL} | 30 | | | | °C/W |
| | R _{θJC} | 40 | | | | |
| | R _{θJA} | 125 | | | | |
| Operating junction temperature range | T _J | -55 to +150 | | | | °C |
| Storage temperature range | T _{STG} | -55 to +150 | | | | °C |

Note 1: Pulse test with PW=300μs, 1% duty cycle

Note 2: Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

| ORDERING INFORMATION | | | | | |
|----------------------|--------------------|--------------|---------------------|-----------|-------------------------|
| PART NO. | AEC-Q101 QUALIFIED | PACKING CODE | GREEN COMPOUND CODE | PACKAGE | PACKING |
| SS1xM (Note 1, 2) | RS | RS | Suffix "G" | Micro SMA | 3,000 / 7" Plastic reel |

Note 1: "x" defines voltage from 30V (SS13M) to 60V (SS16M)

Note 2: Whole series with green compound

| EXAMPLE | | | | | |
|---------------|----------|--------------------|--------------|---------------------|-----------------------------------|
| PREFERRED P/N | PART NO. | AEC-Q101 QUALIFIED | PACKING CODE | GREEN COMPOUND CODE | DESCRIPTION |
| SS16M RSG | SS16M | | RS | G | Green compound |
| SS16MHRSG | SS16M | H | RS | G | AEC-Q101 Qualified Green compound |

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

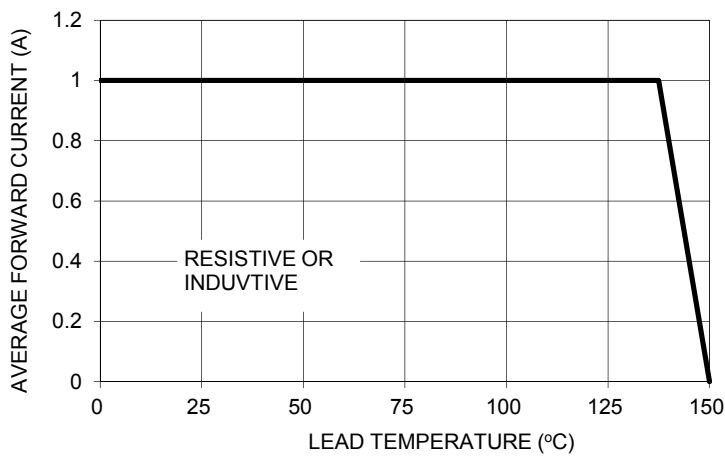


FIG. 2 MAXIMUM FORWARD SURGE CURRENT

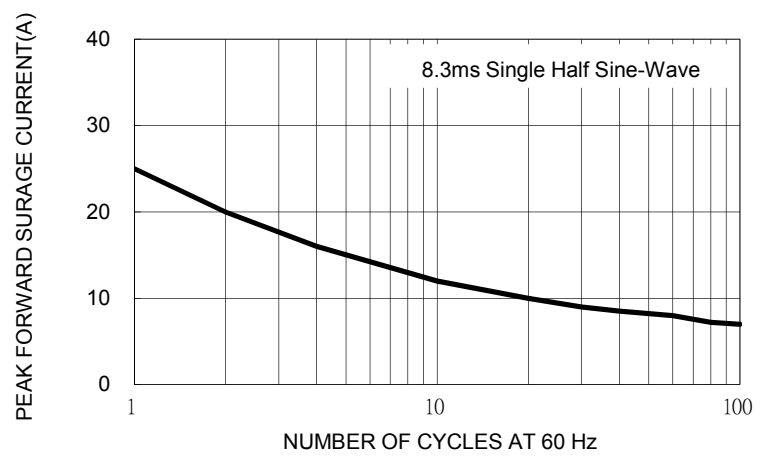


FIG. 3 TYPICAL FORWARD CHARACTERISTICS - SS13M/14M

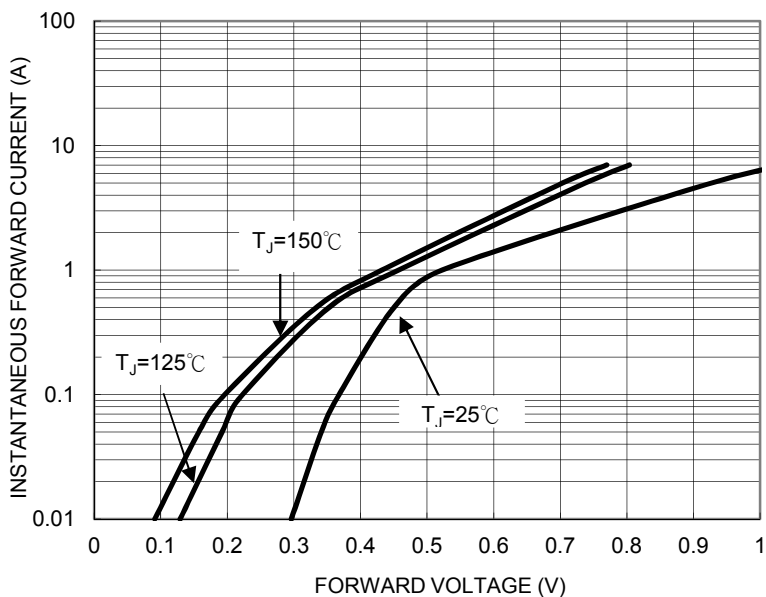


FIG. 4 TYPICAL FORWARD CHARACTERISTICS - SS16M

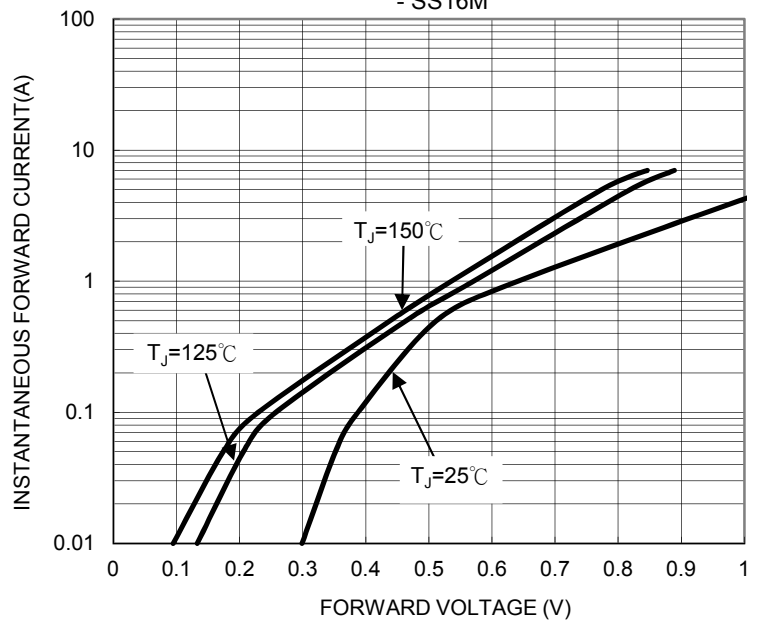


FIG. 5 TYPICAL REVERSE CHARACTERISTICS
- SS13M/14M

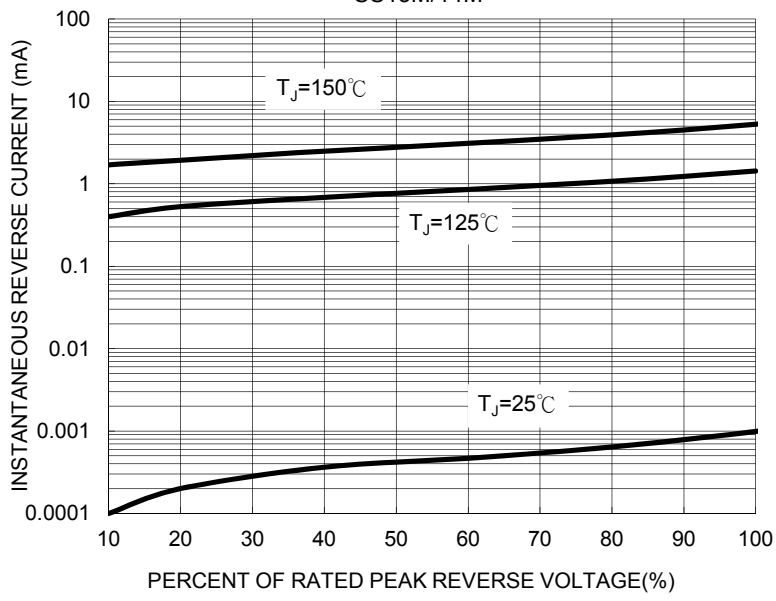


FIG. 6 TYPICAL REVERSE CHARACTERISTICS
- SS16M

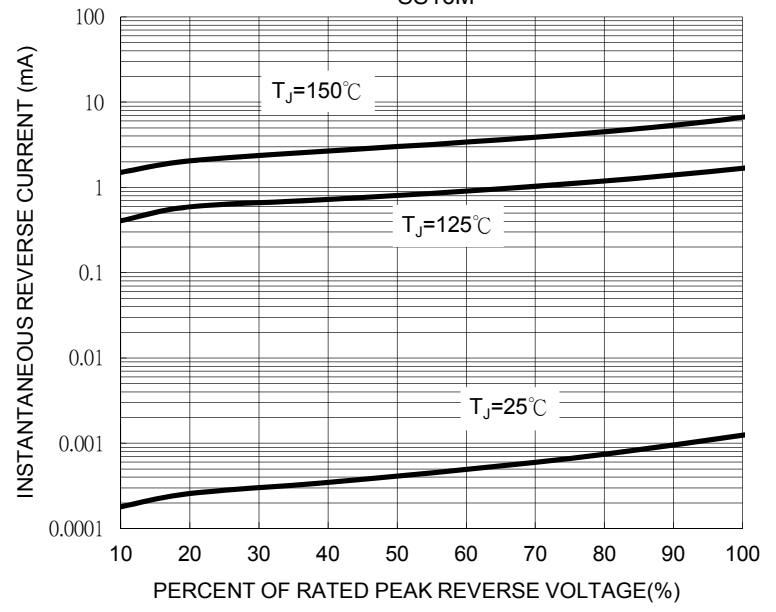


FIG. 7 TYPICAL JUNCTION CAPACITANCE

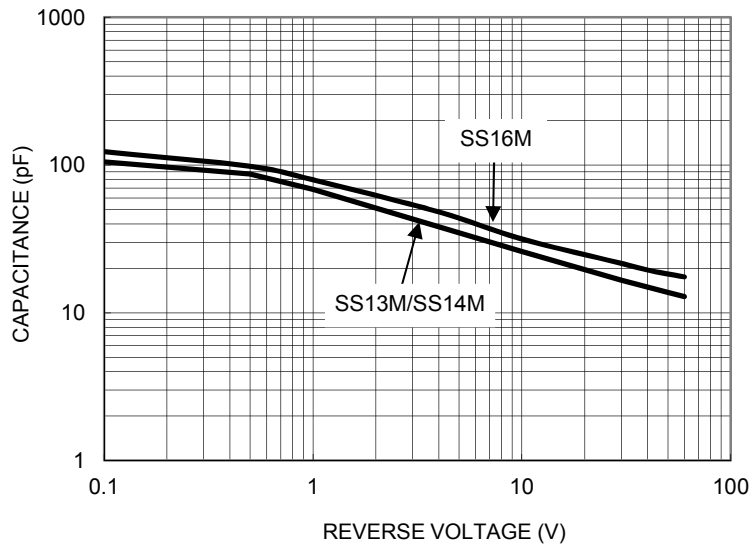
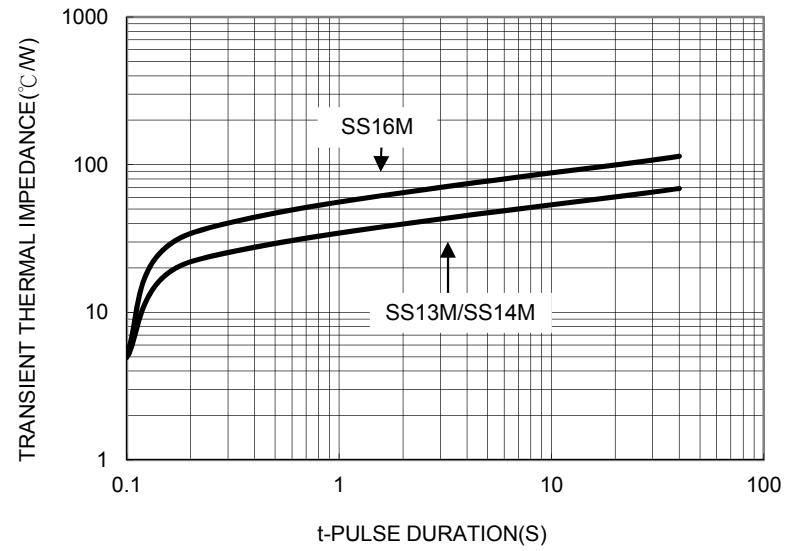
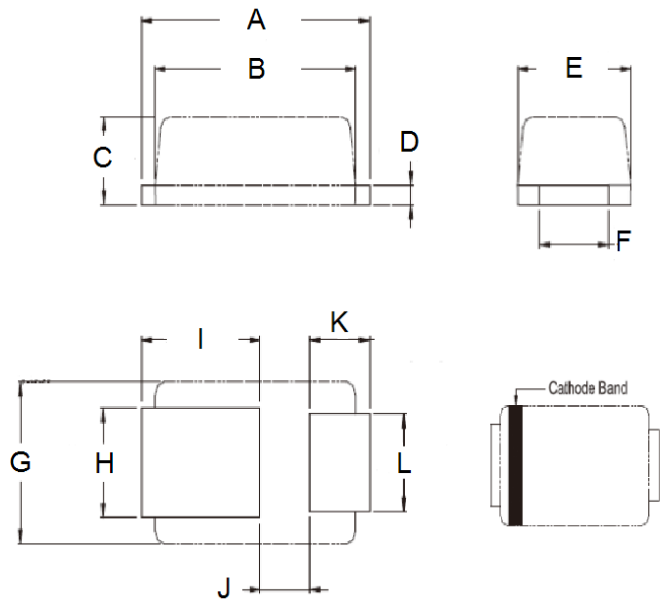


FIG. 8 TYPICAL TRANSIENT THERMAL IMPEDANCE

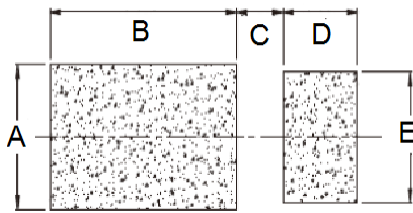


PACKAGE OUTLINE DIMENSIONS



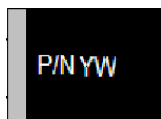
| DIM. | Unit (mm) | | Unit (inch) | |
|------|-----------|------|-------------|-------|
| | Min | Max | Min | Max |
| A | 2.30 | 2.70 | 0.091 | 0.106 |
| B | 2.10 | 2.30 | 0.083 | 0.091 |
| C | 0.63 | 0.73 | 0.025 | 0.029 |
| D | 0.10 | 0.20 | 0.004 | 0.008 |
| E | 1.15 | 1.35 | 0.045 | 0.053 |
| F | 0.65 | 0.85 | 0.026 | 0.034 |
| G | 1.15 | 1.35 | 0.045 | 0.053 |
| H | 0.75 | 0.95 | 0.030 | 0.037 |
| I | 1.10 | 1.50 | 0.043 | 0.059 |
| J | 0.55 | 0.75 | 0.022 | 0.030 |
| K | 0.55 | 0.75 | 0.022 | 0.030 |
| L | 0.65 | 0.85 | 0.026 | 0.034 |

SUGGESTED PAD LAYOUT



| Symbol | Unit (mm) | Unit (inch) |
|--------|-----------|-------------|
| A | 1.1 | 0.043 |
| B | 2.0 | 0.079 |
| C | 0.5 | 0.020 |
| D | 0.8 | 0.031 |
| E | 1.0 | 0.039 |

MARKING DIAGRAM



P/N = Marking code
YW = Date Code

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