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2A, 20V - 150V Surface Mount Schottky Barrier Rectifiers

FEATURES

- Low power loss, high efficiency
- Ideal for automated placement
- Guardring for overvoltage protection
- High surge current capability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



Sub SMA

MECHANICAL DATA

Case: Sub SMA

Molding compound, UL flammability classification rating 94V-0

Moisture sensitivity level: level 1, per J-STD-020

Part no. with suffix "H" means AEC-Q101 qualified

Packing code with suffix "G" means green compound (halogen-free)

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

Meet JESD 201 class 2 whisker test

Polarity: Indicated by cathode band

Weight: 0.019 g (approximately)

| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted) | | | | | | | | | | | |
|--|--------------------|--------------|-----------|-----------|-----------|--------------|-----------|------------|------------|------|----|
| PARAMETER | SYMBOL | SS 22L | SS 23L | SS 24L | SS 25L | SS 26L | SS 29L | SS 210L | SS 215L | UNIT | |
| Marking code | | 22L | 23L | 24L | 25L | 26L | 29L | 20L | 2AL | | |
| Maximum repetitive peak reverse voltage | V _{RRM} | 20 | 30 | 40 | 50 | 60 | 90 | 100 | 150 | V | |
| Maximum RMS voltage | V _{RMS} | 14 | 21 | 28 | 35 | 42 | 63 | 70 | 105 | V | |
| Maximum DC blocking voltage | V _{DC} | 20 | 30 | 40 | 50 | 60 | 90 | 100 | 150 | V | |
| Maximum average forward rectified current | I _{F(AV)} | 2 | | | | | | | | A | |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load | I _{FSM} | 50 | | | | | | | | A | |
| Maximum instantaneous forward voltage (Note 1) @ 2A | V _F | 0.50 | | | 0.70 | | 0.85 | | 0.95 | V | |
| Maximum reverse current @ rated V _R | I _R | 0.4 | | | | | 0.1 | | | | mA |
| | | 15 | | | 10 | | - | | | | |
| | | - | | | - | | 5 | | | | |
| Voltage rate of change (Rated V _R) | dV/dt | 10000 | | | | | | | | V/μs | |
| Typical thermal resistance | R _{θJL} | 17 | | | | | | | | °C/W | |
| | R _{θJA} | 75 | | | | | | | | | |
| Operating junction temperature range | T _J | - 55 to +125 | | | | - 55 to +150 | | | | | °C |
| Storage temperature range | T _{STG} | - 55 to +150 | | | | | | | | | °C |

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

| ORDERING INFORMATION | | | | | |
|----------------------|-----------------|--------------|---------------------|---------|---------------------------------------|
| PART NO. | PART NO. SUFFIX | PACKING CODE | PACKING CODE SUFFIX | PACKAGE | PACKING |
| SS2XL (Note 1) | H | RU | G | Sub SMA | 1,800 / 7" Plastic reel (8mm tape) |
| | | RV | | Sub SMA | 3,000 / 7" Plastic reel (8mm tape) |
| | | RT | | Sub SMA | 7,500 / 13" Paper reel (8mm tape) |
| | | MT | | Sub SMA | 7,500 / 13" Plastic reel (8mm tape) |
| | | RQ | | Sub SMA | 10,000 / 13" Paper reel (8mm tape) |
| | | MQ | | Sub SMA | 10,000 / 13" Plastic reel (8mm tape) |
| | | R3 | | Sub SMA | 1,800 / 7" Plastic reel (12mm tape) |
| | | RF | | Sub SMA | 3,000 / 7" Plastic reel (12mm tape) |
| | | R2 | | Sub SMA | 7,500 / 13" Paper reel (12mm tape) |
| | | M2 | | Sub SMA | 7,500 / 13" Plastic reel (12mm tape) |
| | | RH | | Sub SMA | 10,000 / 13" Paper reel (12mm tape) |
| | | MH | | Sub SMA | 10,000 / 13" Plastic reel (12mm tape) |

Note 1: "x" defines voltage from 20V (SS22L) to 150V (SS215L)

| EXAMPLE | | | | | |
|--------------------|----------|-----------------|--------------|---------------------|-----------------------------------|
| PREFERRED PART NO. | PART NO. | PART NO. SUFFIX | PACKING CODE | PACKING CODE SUFFIX | DESCRIPTION |
| SS26LHRUG | SS26L | H | RU | G | AEC-Q101 qualified Green compound |

RATINGS AND CHARACTERISTICS CURVES ($T_A=25^\circ\text{C}$ unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

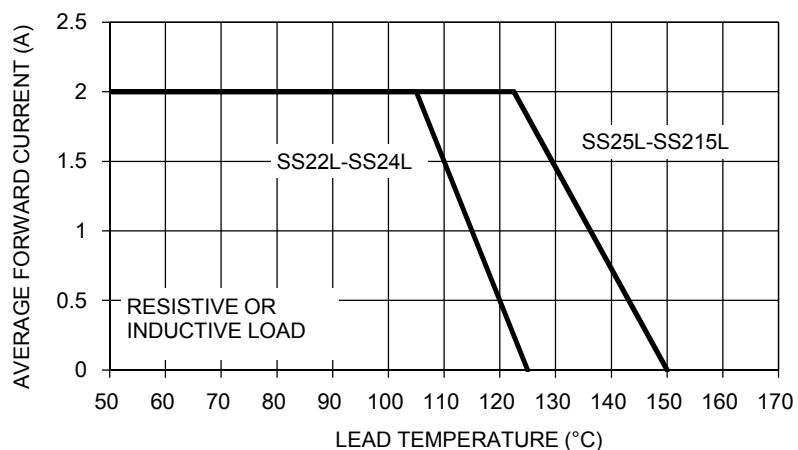


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

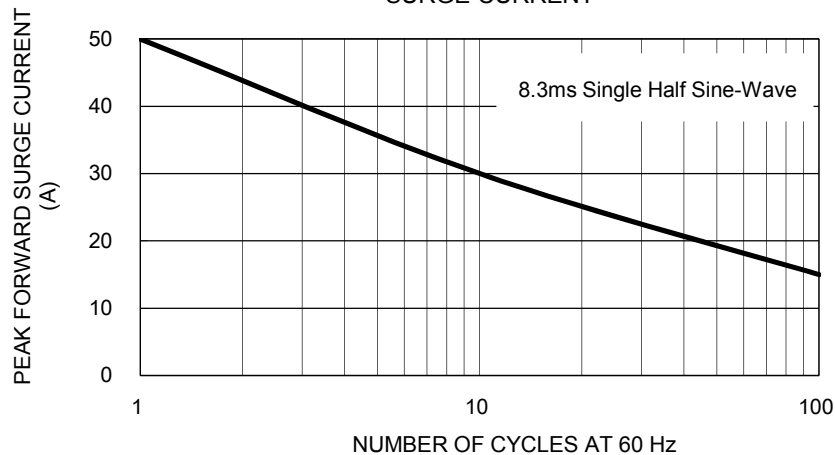


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

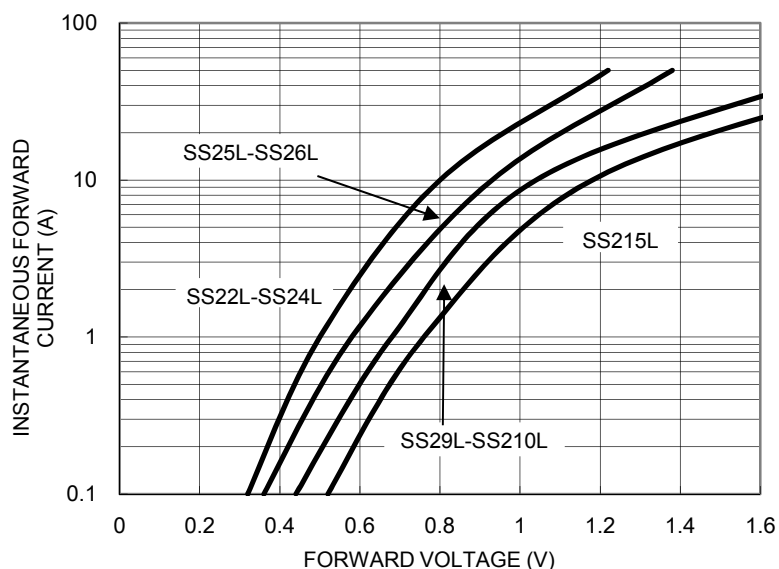


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

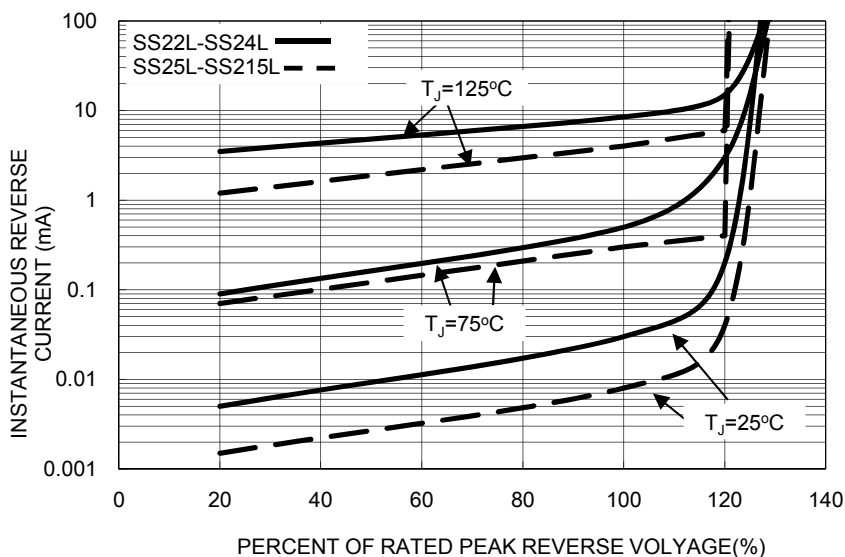


FIG. 5 TYPICAL JUNCTION CAPACITANCE

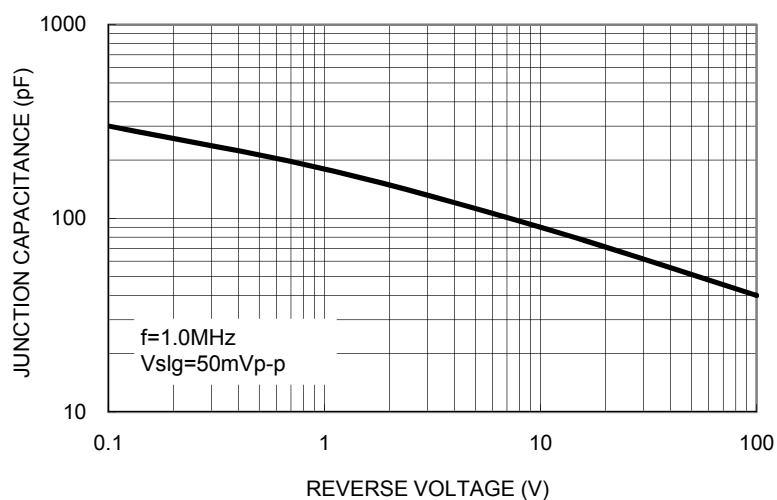
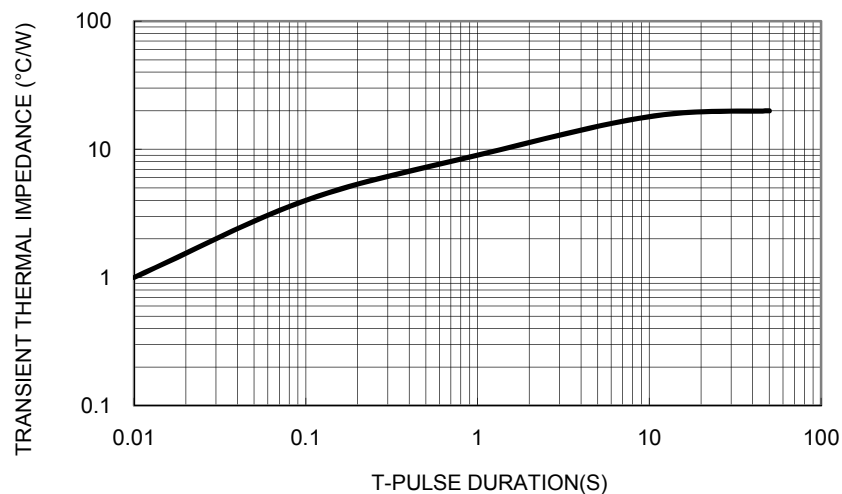
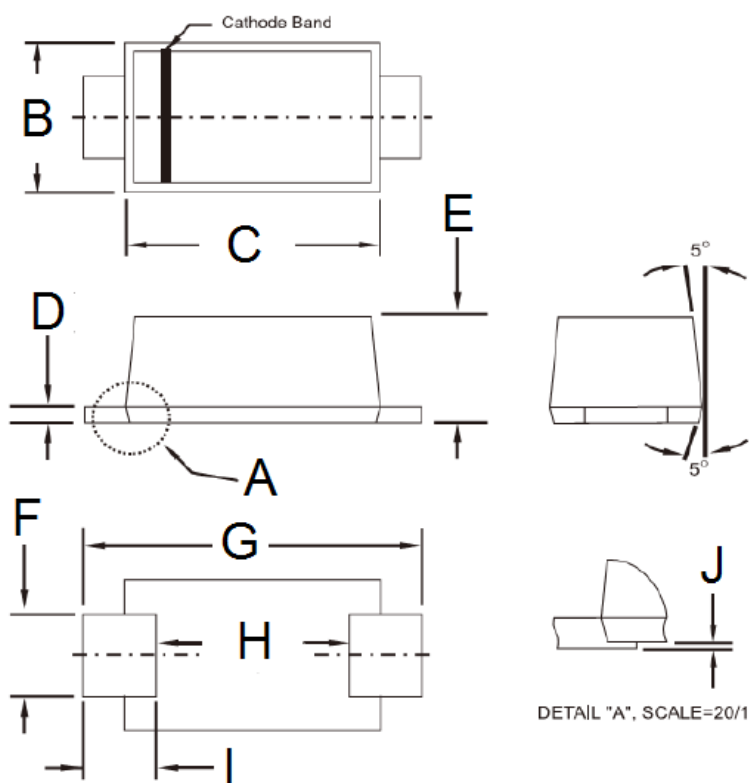


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE



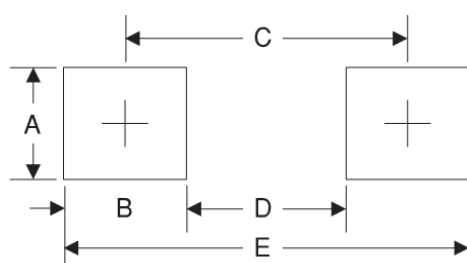
PACKAGE OUTLINE DIMENSIONS

Sub SMA



| DIM. | Unit (mm) | | Unit (inch) | |
|------|-----------|------|-------------|-------|
| | Min | Max | Min | Max |
| B | 1.70 | 1.90 | 0.067 | 0.075 |
| C | 2.70 | 2.90 | 0.106 | 0.114 |
| D | 0.16 | 0.30 | 0.006 | 0.012 |
| E | 1.23 | 1.43 | 0.048 | 0.056 |
| F | 0.80 | 1.20 | 0.031 | 0.047 |
| G | 3.40 | 3.80 | 0.134 | 0.150 |
| H | 2.45 | 2.60 | 0.096 | 0.102 |
| I | 0.35 | 0.85 | 0.014 | 0.033 |
| J | 0.00 | 0.10 | 0.000 | 0.004 |

SUGGESTED PAD LAYOUT



| Symbol | Unit (mm) | Unit (inch) |
|--------|-----------|-------------|
| A | 1.4 | 0.055 |
| B | 1.2 | 0.047 |
| C | 3.1 | 0.122 |
| D | 1.9 | 0.075 |
| E | 4.3 | 0.169 |

MARKING DIAGRAM



- P/N = Marking Code
- G = Green Compound
- YW = Date Code
- F = Factory Code

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