

1.5A, 600V - 1000V Glass Passivated Bridge Rectifiers

FEATURES

- Glass passivated junction
- Ideal for automated placement
- Reliable low cost construction utilizing molded plastic technique
- 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



ABS

MECHANICAL DATA

Case: Molded plastic body

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: Polarity as marked on the body

Weight: 0.096 g (approximately)



| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted) | | | | | | |
|--|--------------------------------------|---------------------|------------------|---------------------|------------------|------------------|
| PARAMETER | SYMBOL | ABS15J | | ABS15M | | Unit |
| Maximum repetitive peak reverse voltage | V _{RRM} | 600 | | 1000 | | V |
| Maximum RMS voltage | V _{RMS} | 420 | | 700 | | V |
| Maximum DC blocking voltage | V _{DC} | 600 | | 1000 | | V |
| Maximum average forward rectified current On glass-epoxy On aluminum substrate | I _{F(AV)} | 1.5 2.0 | | | | A |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load | I _{FSM} | 40 | | | | A |
| Peak forward surge current, 1 ms single half sine-wave superimposed on rated load | I _{FSM} | 100 | | | | A |
| Rating for fusing (t<8.3ms) | I ² t | 6.64 | | | | A ² s |
| Maximum instantaneous forward voltage (Note 1) I _F = 0.5 A I _F = 1.5 A | V _F | TYP 0.88 0.97 | MAX - 1.00 | TYP 0.88 0.97 | MAX - 1.00 | V |
| Maximum reverse current @ rated V _R T _J =25°C T _J =125°C | I _R | 5 150 | | | | μA |
| Typical thermal resistance | R _{θJL} R _{θJA} | 25 80 | | | | °C/W |
| 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

ORDERING INFORMATION

| PART NO. | PART NO. SUFFIX | PACKING CODE | PACKING CODE SUFFIX | PACKAGE | PACKING |
|--------------------|-----------------|--------------|---------------------|---------|-------------------------|
| ABS15x (Note 1) | H | RE | G | ABS | 1,000 / 7" Plastic reel |
| | | RG | | ABS | 5,000 / 13" Paper reel |

Note 1: "x" defines voltage from 600V (ABS15J) to 1000V (ABS15M)

Note 2: Whole series with green compound

EXAMPLE

| PREFERRED P/N | PART NO. | PART NO. SUFFIX | PACKING CODE | PACKING CODE SUFFIX | DESCRIPTION |
|---------------|----------|-----------------|--------------|---------------------|--------------------------------------|
| ABS15JHREG | ABS15J | H | RE | G | AEC-Q101 qualified Green compound |

RATINGS AND CHARACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

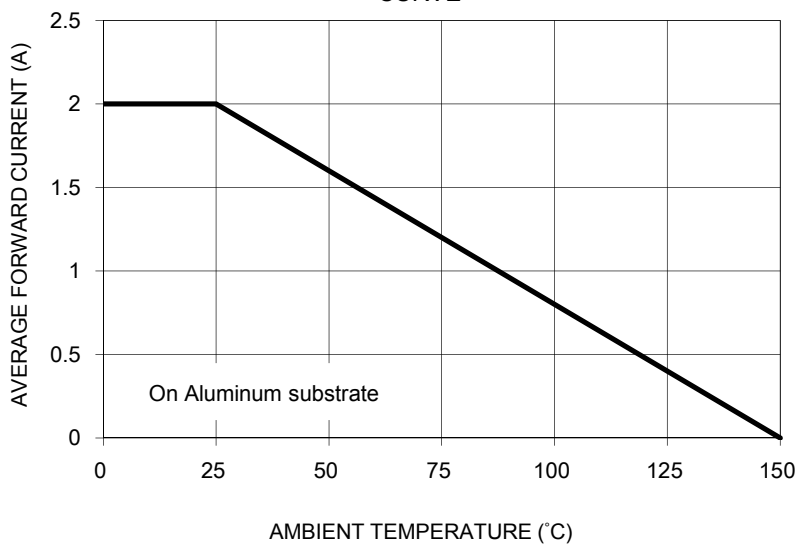


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

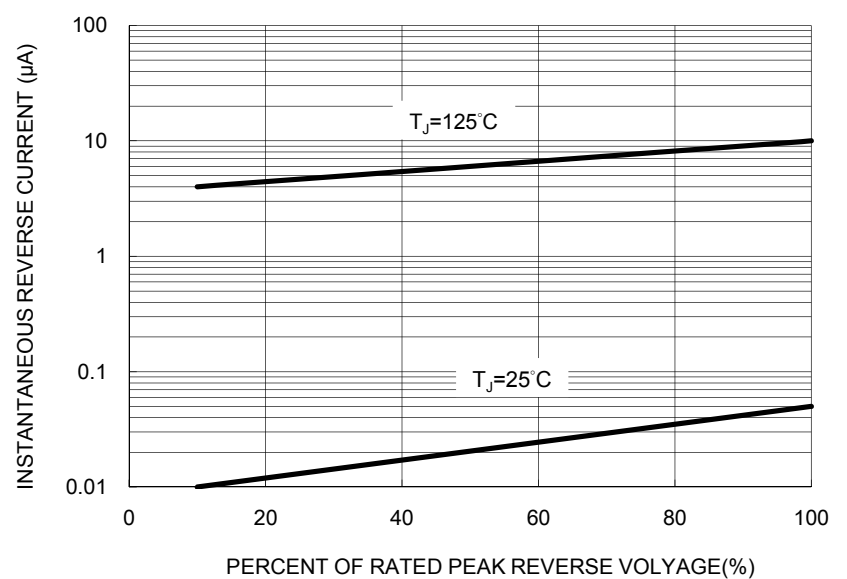


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

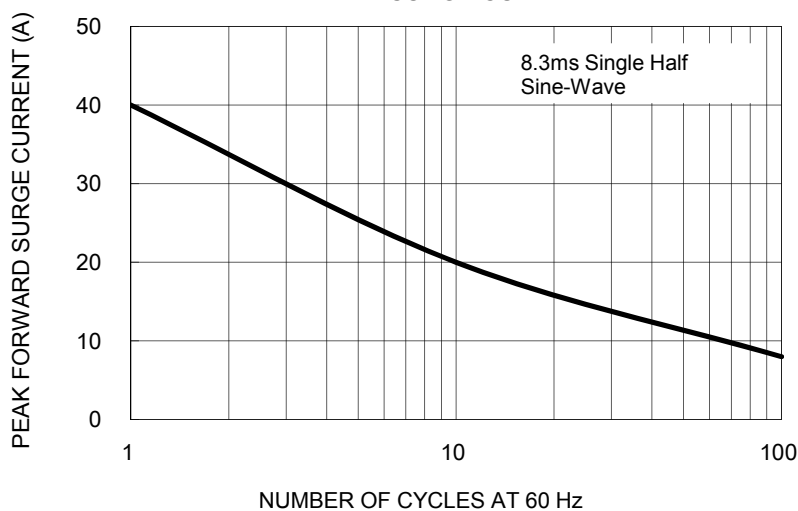


FIG. 4 TYPICAL JUNCTION CAPACITANCE

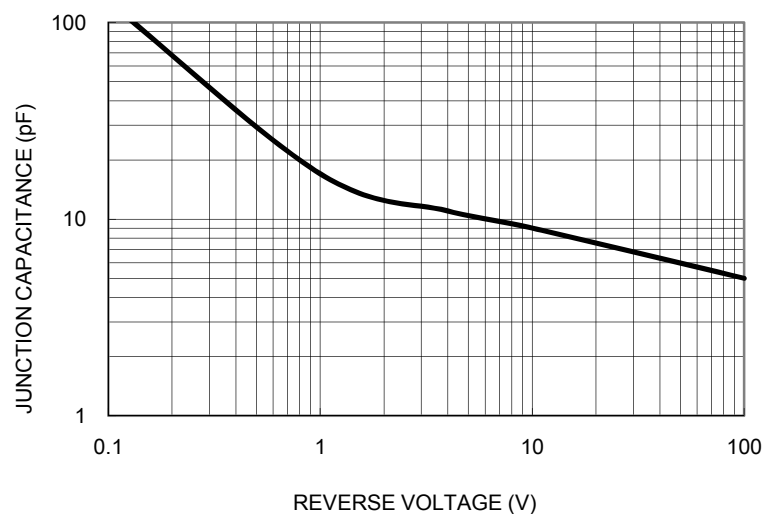


FIG. 5 TYPICAL FORWARD CHARACTERISTICS



PACKAGE OUTLINE DIMENSIONS

ABS



| DIM. | Unit (mm) | | Unit (inch) | |
|------|-----------|------|-------------|-------|
| | Min | Max | Min | Max |
| B | 4.30 | 4.50 | 0.169 | 0.177 |
| C | 6.25 | 6.65 | 0.246 | 0.262 |
| D | 0.60 | 0.70 | 0.024 | 0.028 |
| E | 3.90 | 4.10 | 0.154 | 0.161 |
| F | 4.90 | 5.10 | 0.193 | 0.200 |
| G | 1.40 | 1.60 | 0.055 | 0.063 |
| H | 1.35 | 1.45 | 0.053 | 0.057 |
| I | 0.05 | 0.15 | 0.002 | 0.006 |
| J | 0.30 | 0.70 | 0.012 | 0.028 |
| K | 0.15 | 0.25 | 0.006 | 0.010 |

SUGGESTED PAD LAYOUT



| Symbol | Unit (mm) | Unit (inch) |
|--------|-----------|-------------|
| A | 1.50 | 0.059 |
| B | 0.90 | 0.035 |
| C | 4.22 | 0.166 |
| D | 7.22 | 0.284 |
| E | 2.05 | 0.081 |
| F | 5.72 | 0.225 |

MARKING DIAGRAM



P/N = Specific Device Code
YW = Date Code
F = Factory Code

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