

TRENCH SCHOTTKY RECTIFIER

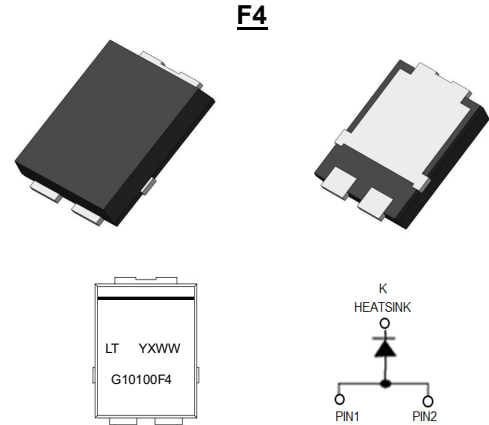
REVERSE VOLTAGE – 100 Volts
FORWARD CURRENT – 10 Amperes

FEATURES

- Rating to 100V PRV
- Ideal for printed circuit board
- Low profile package
- Qualified according to AEC-Q101 Rev_C
- Reliable low cost construction utilizing molded plastic technique

MECHANICAL DATA

- Case Material: Molding compound, UL Flammability classification 94V-0, "Halogen-free".
- Polarity indicator: As marked on body
- Marking code: G10100F4
- Weight: 126 mg



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

| PARAMETER | SYMBOL | VALUE | UNIT |
|---|-----------|------------|------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 100 | V |
| Maximum DC blocking voltage | V_{DC} | 100 | V |
| Average rectified forward current | I_F | 10 | A |
| Peak forward surge 8.3ms single half sine-wave superimposed on rated load | I_{FSM} | 120 | A |
| Operating temperature range | T_J | -55 ~ +150 | °C |
| Storage temperature range | T_{STG} | -55 ~ +150 | °C |

STATIC ELECTRICAL CHARACTERISTICS

| PARAMETER | TEST CONDITION | SYMBOL | TYP | MAX | UNIT |
|---------------------------------------|---|--------|--------------|--------------|------|
| Forward voltage (Note 1) | $I_F=10A$ $T_J = 25^\circ C$ $T_J = 125^\circ C$ | V_F | 0.74 0.70 | 0.80 0.76 | V |
| Reverse leakage current | $V_R=100V$ $T_J = 25^\circ C$ $T_J = 125^\circ C$ | I_R | 0.01 6 | 0.12 25 | mA |
| Typical junction capacitance (Note 2) | | C_J | | 610 | pF |

THERMAL CHARACTERISTICS

| PARAMETER | SYMBOL | TYP | UNIT |
|---------------------------------------|------------|-----|------|
| Typical thermal resistance (Note 3,4) | R_{thJA} | 15 | °C/W |
| | R_{thJL} | 3 | |
| | R_{thJC} | 2 | |

Note :

- (1) 300us pulse width, 2% duty cycle
- (2) Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
- (3) Thermal resistance test is performed in accordance with JESD-51.
- (4) The unit mounted 50mm x 50 mm x 2 mm copper pad.

REV.-5, Sep.-2019, KSHA35

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RATING AND CHARACTERISTIC CURVES G10100F4



FIG.1- FORWARD CURRENT DERATING CURVE

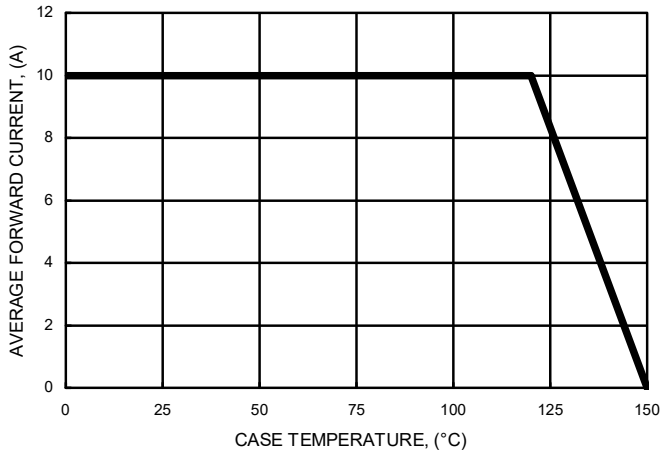


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

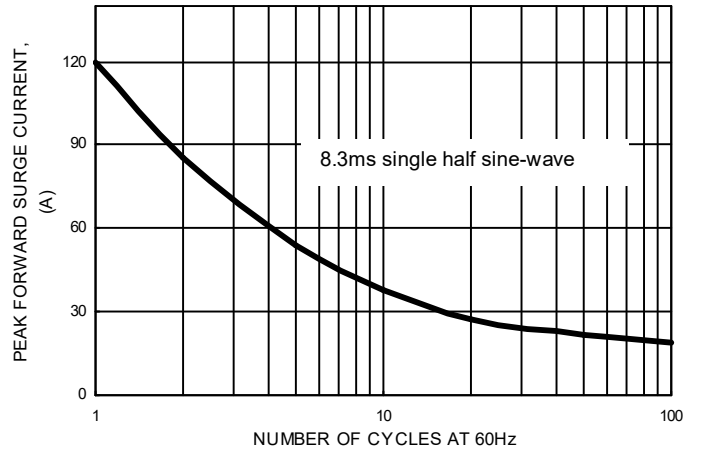


FIG.3- TYPICAL FORWARD CHARACTERISTICS

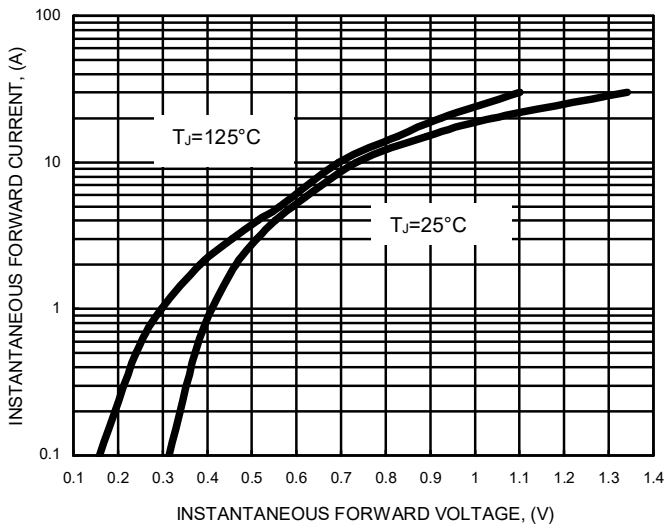


FIG.4- TYPICAL JUNCTION CAPACITANCE

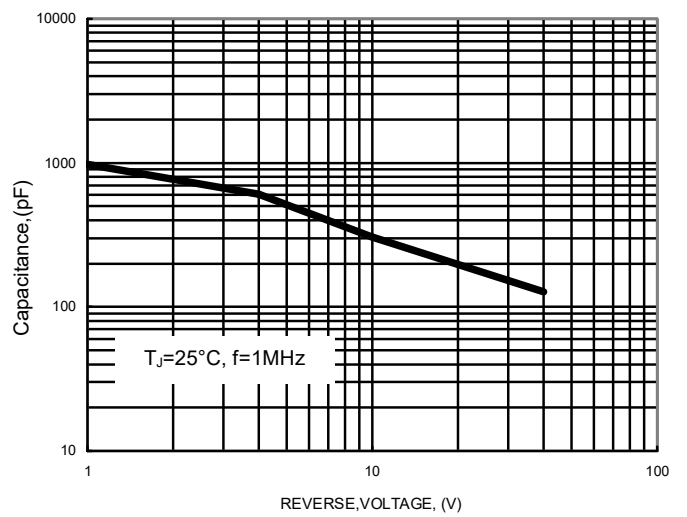
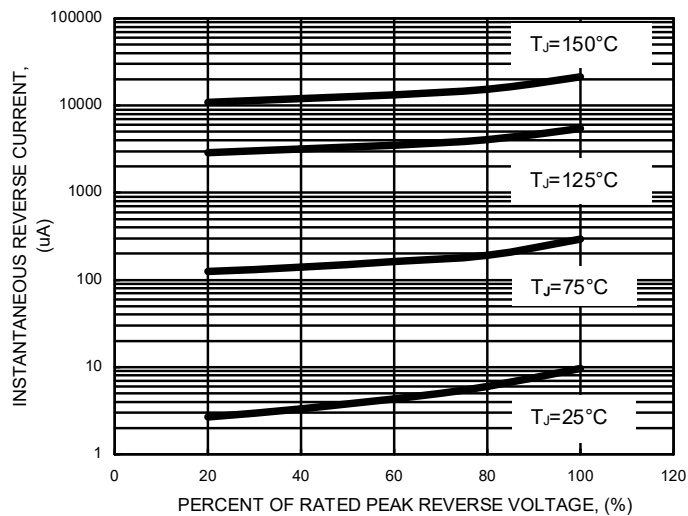
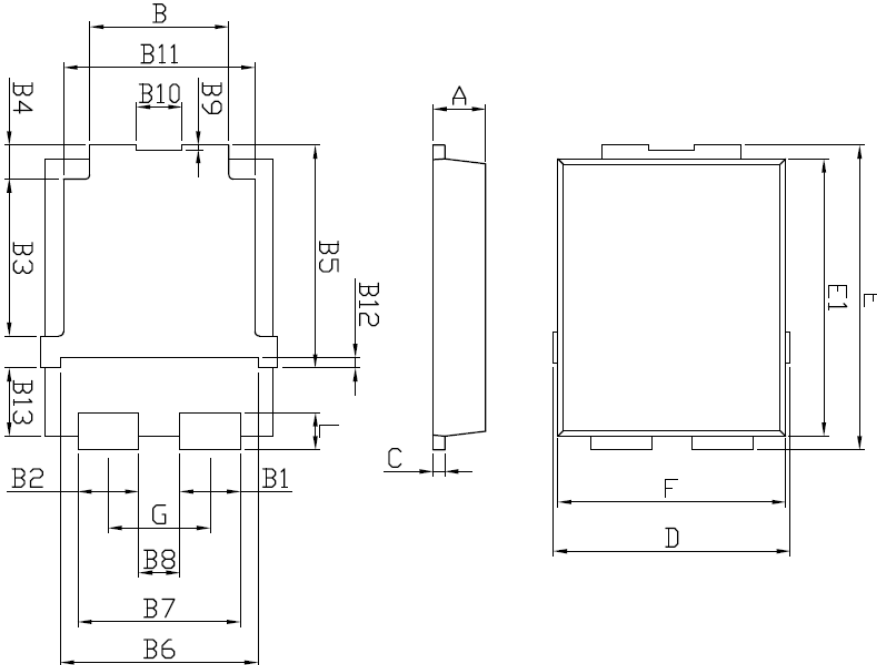


FIG.5- TYPICAL REVERSE CHARACTERISTICS



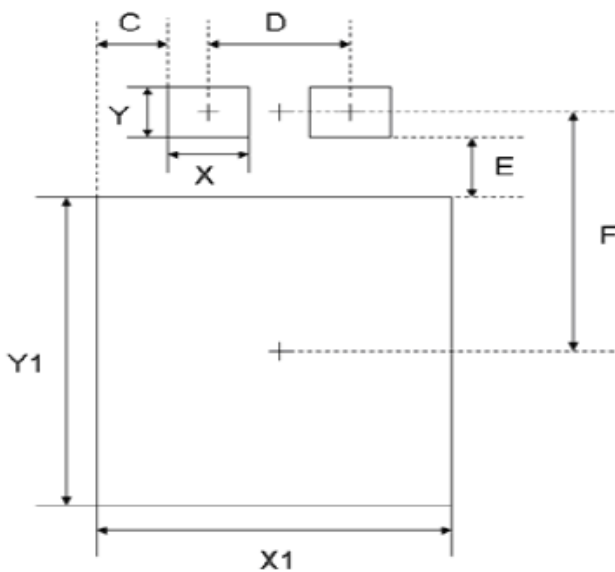
Package Dimension :



| F4 | | | |
|------|------|------|------|
| DIM. | MIN. | TYP. | MAX |
| A | 1.05 | 1.15 | 1.25 |
| B | 2.90 | 3.05 | 3.20 |
| B1 | 1.20 | 1.34 | 1.50 |
| B2 | 1.20 | 1.34 | 1.50 |
| B3 | 3.30 | 3.45 | 3.60 |
| B4 | 0.60 | 0.75 | 0.90 |
| B5 | 4.75 | 4.90 | 5.05 |
| B6 | 4.19 | 4.34 | 4.49 |
| B7 | 3.42 | 3.58 | 3.72 |
| B8 | 0.72 | 0.90 | 1.08 |
| B9 | 0.02 | 0.10 | 0.20 |
| B10 | 0.85 | 1.00 | 1.15 |
| B11 | 4.05 | 4.20 | 4.35 |
| B12 | 0.08 | 0.23 | 0.38 |
| B13 | 1.30 | 1.50 | 1.70 |
| C | 0.15 | 0.25 | 0.35 |
| D | 5.05 | 5.20 | 5.35 |
| E | 6.55 | 6.70 | 6.85 |
| E1 | 5.95 | 6.10 | 6.25 |
| F | 4.85 | 5.00 | 5.15 |
| G | 2.10 | 2.24 | 2.40 |
| L | 0.68 | 0.82 | 1.00 |

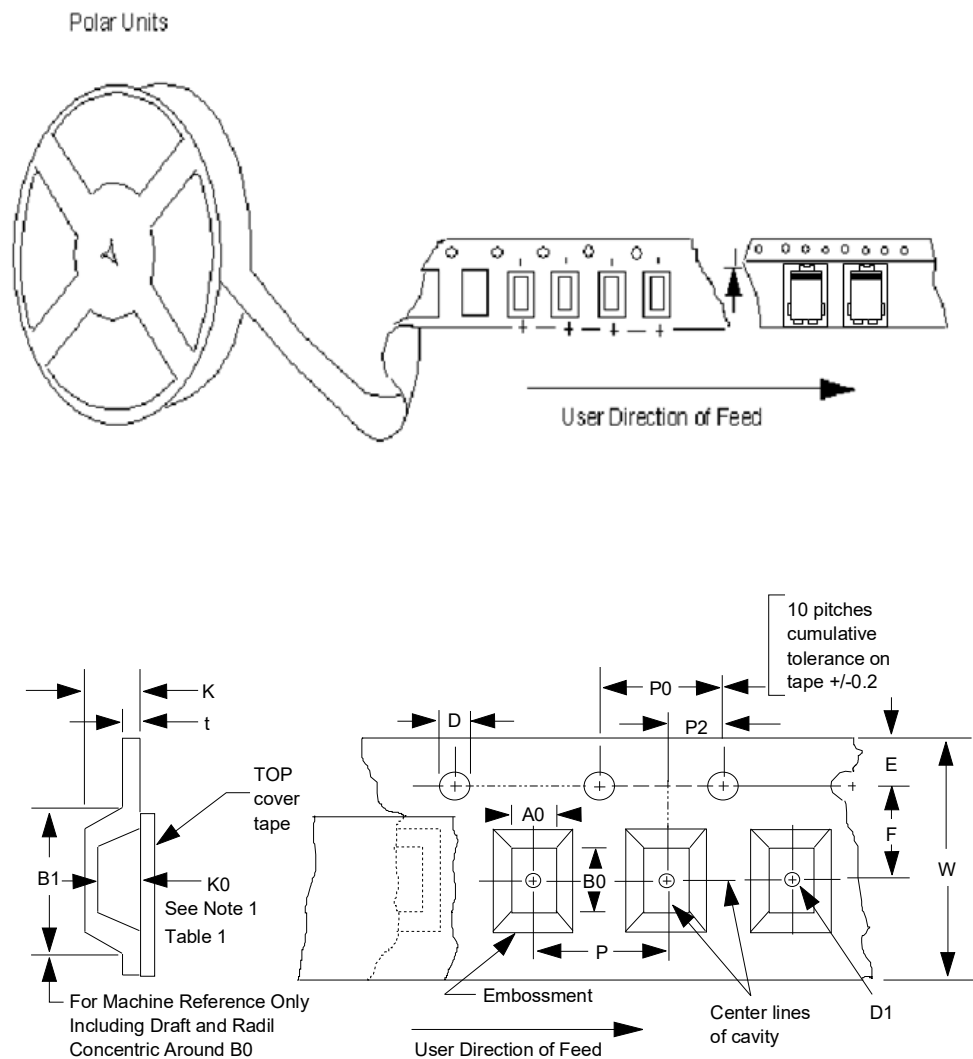
All dimension in millimeter

Soldering Pad Layout :



| DIM. | MILLIMETERS | INCHES. |
|------|-------------|---------|
| C | 0.7725 | 0.0304 |
| D | 2.2250 | 0.0876 |
| E | 0.4350 | 0.0171 |
| F | 3.8000 | 0.1496 |
| X | 1.7300 | 0.0681 |
| X1 | 5.5000 | 0.2165 |
| Y | 1.4300 | 0.0562 |
| Y1 | 5.3000 | 0.2087 |

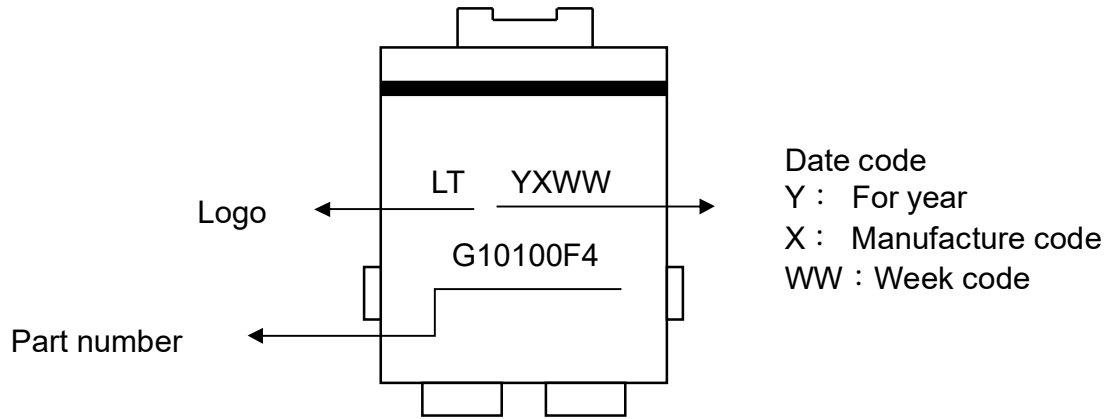
Embossed Carrier Dimension :



UNIT: mm

| TAPE SIZE | D | E | P0 | t (MAX) | A0 | B0 | K0 |
|-----------|-------------|-------------|------------|---------|-----------|-------------|-----------|
| 16mm | 1.55+/-0.05 | 1.75+/-0.10 | 4.0+/-0.10 | 0.35 | 5.5+/-0.1 | 6.95+/-0.1 | 1.4+/-0.1 |
| | B1 (MAX) | D1 (MIN) | F | K (MAX) | P2 | W | P |
| | 7.05 | 1.5 | 7.5+/-0.1 | 1.75 | 2.0+/-0.1 | 16.0+/-0.30 | 8.0+/-0.1 |

Marking Information :



Packaging Information :

| DEVICE | Q'TY/REEL (PCS) | REEL DIA. (INCH) | Q'TY/BOX (PCS) | Q'TY/CARTON (PCS) |
|----------|--------------------|---------------------|-------------------|----------------------|
| G10100F4 | 4000 | 13 | 4000 | 48K |

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