

SILICON RECTIFIER

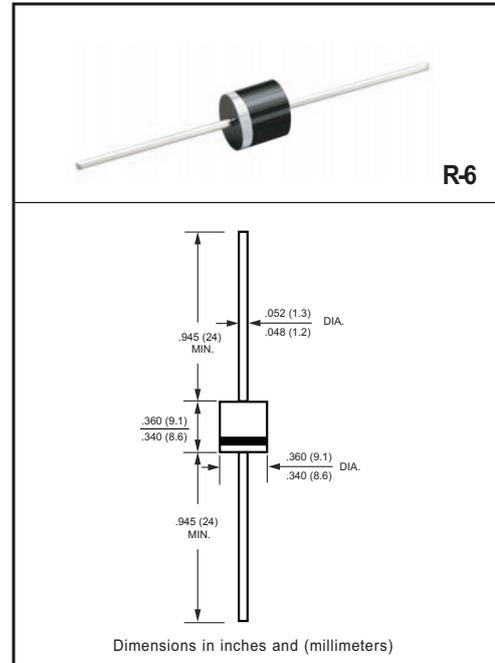
VOLTAGE RANGE 1000 Volts CURRENT 6.0 Amperes

FEATURES

- * High surge current capability
- * Low leakage
- * Low forward voltage drop
- * High current capability
- * Low lost

MECHANICAL DATA

- * Case: Molded plastic black body
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)

| RATINGS | SYMBOL | 6A05 | 6A1 | 6A2 | 6A4 | 6A6 | 6A8 | 6A10 | UNITS |
|---|-----------------------------------|------|-----|-----|--------------|-----|-----|------|--------------------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | | | | 1000 | | | | Volts |
| Maximum RMS Voltage | V _{RMS} | | | | 700 | | | | Volts |
| Maximum DC Blocking Voltage | V _{DC} | | | | 1000 | | | | Volts |
| Maximum Average Forward Rectified Current at TA = 50°C | I _O | | | | 6.0 | | | | Amps |
| Peak Forward Surge Current IFM(surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I _{FSM} | | | | 400 | | | | Amps |
| Current Squared Time | I ² t | | | | 663.7 | | | | A ² Sec |
| Typical Thermal Resistance (Note 2) | R _{θJA} | | | | 10 | | | | °C/W |
| Typical Junction Capacitance (Note 1) | C _J | | | | 150 | | | | pF |
| Operating and Storage Temperature Range | T _J , T _{STG} | | | | -55 to + 150 | | | | °C |

ELECTRICAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)

| CHARACTERISTICS | SYMBOL | 6A05 | 6A1 | 6A2 | 6A4 | 6A6 | 6A8 | 6A10 | UNITS |
|---|-------------------------|------|-----|-----|-----|-----|-----|------|-------|
| Maximum Forward Voltage at 6.0A DC | V _F | | | | 1.0 | | | | Volts |
| Maximum DC Average Reverse Current at Rated DC Blocking Voltage | @T _A = 25°C | | | | 0.3 | | | | uAmps |
| | @T _A = 150°C | | | | 1.5 | | | | mAmps |

NOTES : 1. Measured at 1.0 MHz and applied average voltage of 4.0VDC
2. Thermal Resistance: At 9.5mm lead lengths,PCB mounted.

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RATING AND CHARACTERISTICS CURVES (6A05 THRU 6A10)

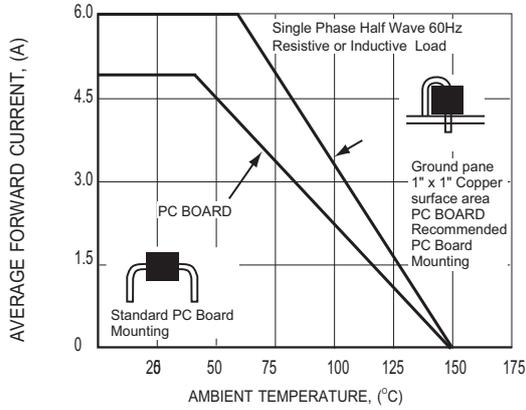


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

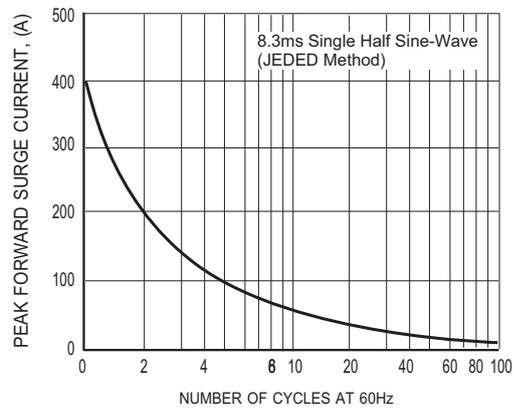


FIG.2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

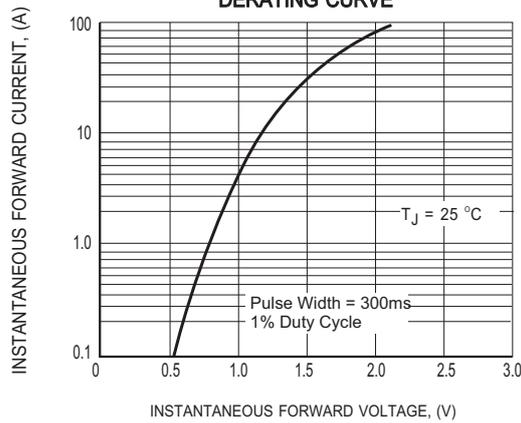


FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

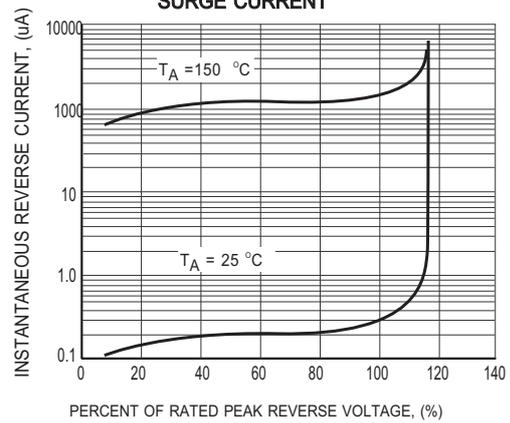


FIG.4 MAXIMUM REVERSE CHARACTERISTICS

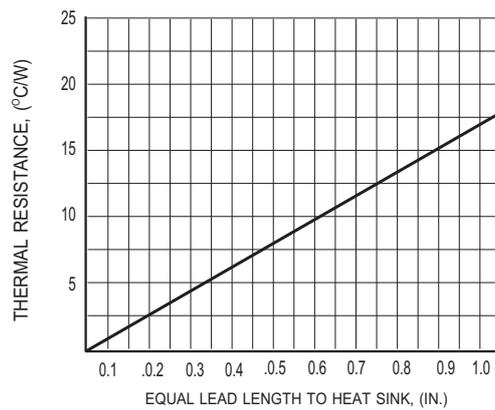
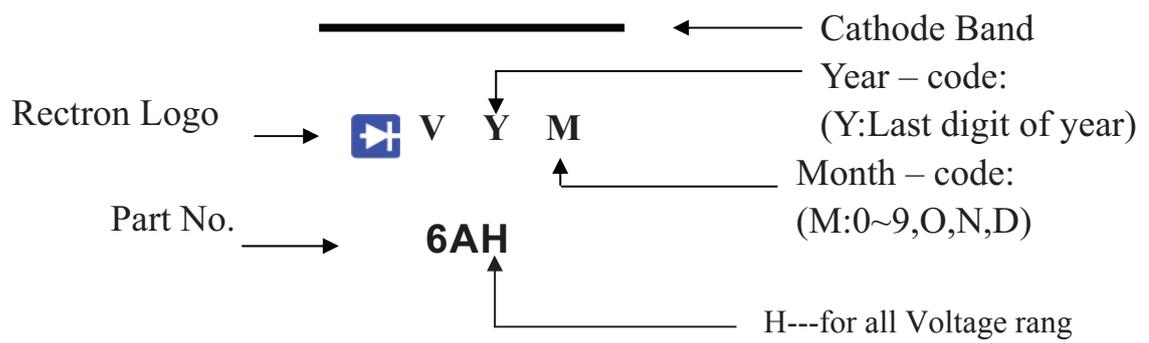


FIG.5 TYPICAL THERMAL RESISTANCE vs. LEAD LENGTH

Marking Description



AXIAL LEAD TAPING SPECIFICATIONS FOR RECTIFIERS

Axial lead devices are packed in accordance with EIA standard RS-296-D and specifications given below.

| COMPONENT OUTLINE | COMPONENT PITCH A | INNER TAPE PITCH B | | CUMULATIVE PITCH TOLERANCE |
|----------------------|----------------------------|----------------------------|----------------------------|-------------------------------|
| | $\pm 0.5\text{mm} (.020")$ | $\pm 0.5\text{mm} (.020")$ | $\pm 1.5\text{mm} (.059")$ | |
| T-1 | 5.0mm | 26.0mm | | 2.0mm/20pitch |
| R-1 | 5.0mm | 26.0mm | | 2.0mm/20pitch |
| R-1 | 5.0mm | | 52.4mm | 2.0mm/20pitch |
| A-405 | 5.0mm | 26.0mm | | 2.0mm/20pitch |
| A-405 | 5.0mm | | 52.4mm | 2.0mm/20pitch |
| DO-41 | 5.0mm | 26.0mm | | 2.0mm/20pitch |
| DO-41 | 5.0mm | | 52.4mm | 2.0mm/10pitch |
| DO-15 | 5.0mm | | 52.4mm | 2.0mm/10pitch |
| R-3 | 5.0mm | | 52.4mm | 2.0mm/10pitch |
| DO-201AD | 10.0mm | | 52.4mm | 2.0mm/10pitch |
| R-6 | 10.0mm | | 52.4mm | 2.0mm/10pitch |
| 1.5KE | 10.0mm | | 52.4mm | 2.0mm/10pitch |

Note: -E for 26mm inner tape pitch
-F & -T for 52mm inner tape pitch

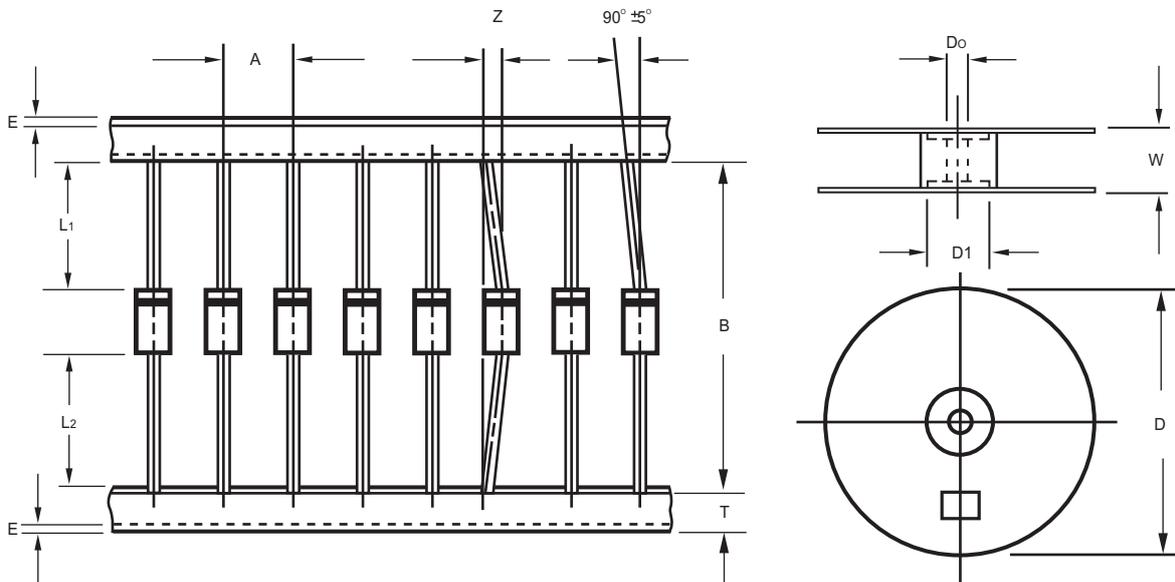


Fig.: Configuration of AXIAL LEAD TAPING

| ITEM | SYMBOL | SPECIFICATIONS (mm) | SPECIFICATIONS (inch) |
|-----------------------|-----------|---------------------|-----------------------|
| Component alignment | Z | 1.2 Max. | 0.048 Max. |
| Tape width | T | 6.0 ± 0.4 | 0.236 ± 0.016 |
| Exposed adhesive | E | 0.8 Max. | 0.032 Max. |
| Body eccentricity | $ L1-L2 $ | 1.0 Max. | 0.040 Max. |
| Reel outside diameter | D | 330.0 | 13.0 |
| Reel inner diameter | D1 | 85.7 ± 0.3 | 3.375 ± 0.012 |
| Feed hole diameter | Do | 30.5 ± 0.4 | 1.201 ± 0.016 |
| Reel width | W | 79.0 ± 1.0 | 3.110 ± 0.040 |

Notes : 1. Each component lead shall be sandwiched between tapes for a minimum of 3.2mm (0.126").
2. The reel width "W" for 26mm taping is $50.0 \pm 1.0\text{mm} (1.97" \pm 0.040")$.

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PACKAGING OF DIODE AND BRIDGE RECTIFIERS

BULK PACK

| PACKAGE | PACKING CODE | EA PER BOX | INNER BOX SIZE (mm) | CARTON SIZE (mm) | EA PER CARTON | GROSS WEIGHT(Kg) |
|---------|--------------|------------|---------------------|------------------|---------------|------------------|
| R-6/R-7 | -B | 200 | 300*73*40 | 347*320*271 | 4,800 | 12.93/14.57 |

eg(TYPE):6A10-B

REEL PACK

| PACKAGE | PACKING CODE | EA PER REEL | EA PER INNER BOX | COMPONENT SPACE (mm) | TAPE SPACE (mm) | REEL DIA (mm) | CARTON SIZE (mm) | EA PER CARTON | GROSS WEIGHT(Kg) |
|---------|--------------|-------------|------------------|----------------------|-----------------|---------------|------------------|---------------|------------------|
| R-6/R-7 | -T | 800 | 800 | 9.5 | 52 | 330 | 355*350*335 | 3,200 | 9.72/9.91 |

eg(TYPE):6A10-T

AMMO PACK

| PACKAGE | PACKING CODE | REEL (EA) | COMPONENT SPACE(mm) | TAPE SPACE (mm) | BOX SIZE (mm) | CARTON SIZE(mm) | CARTON (EA) | GROSS WEIGHT (Kg) |
|---------|--------------|-------------|---------------------|-----------------|---------------|-----------------|---------------|-------------------|
| R-6/R-7 | -F | 300 | 9.5 | 52 | 255*73*100 | 400*268*225 | 3,000 | 8.5/8.7 |

eg(TYPE):6A10-F

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