PANJIT SEMI CONDUCTOR

# 1A1~1A7

## MINIATURE PLASTIC SILICON RECTIFIER

**VOLTAGE** 50 to 1000 Volts **CURRENT** 1.0 Amperes

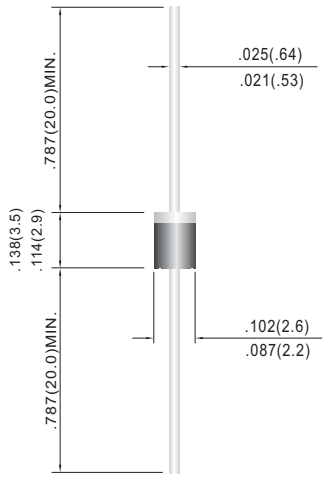
### FEATURES

- High rellability.
- Low leakage.
- Low forward voltage drop.
- High current capability.
- Exceeds environmental standards of MIL-S-19500 / 228
- Lead free in comply with EU RoHS 2002/95/EC directives

### MECHANICALDATA

- Case: Molded plastic, R-1
- Epoxy: UL 94V-O rate flame retardant.
- Lead: MIL-STD-750 method 2026
- Mounting Position: Any
- Weight: 0.0064 ounce, 0.181 gram

R-1 Unit: inch(mm)




### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.

| PARAMETER | SYMBOL | 1A1 | 1A2 | 1A3 | 1A4 | 1A5 | 1A6 | 1A7 | UNITS |
|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Current .375"(9.5mm) lead length at $T_A$=50°C | $I_{F(AV)}$ | 1.0 | | | | | | | A |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load(JEDEC method) | $I_{FSM}$ | 30 | | | | | | | A |
| Maximum Forward Voltage at 1.0A | $V_F$ | 1.1 | | | | | | | V |
| Maximum DC Reverse Current at $T_J$=25°C<br>Rated DC Blocking Voltage $T_J$=100°C | $I_R$ | 5.0<br>500 | | | | | | | µA |
| Typical Junction capacitance (Note 1) | $C_J$ | 15 | | | | | | | pF |
| Typical Thermal Resistance | $R_{\theta JA}$ | 60 | | | | | | | °C / W |
| Operating Junction and Storage Temperature Range | $T_J$,$T_{STG}$ | -55 to +150 | | | | | | | °C |

NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0 volts.

# 1A1~1A7

## RATING AND CHARACTERISTIC CURVES

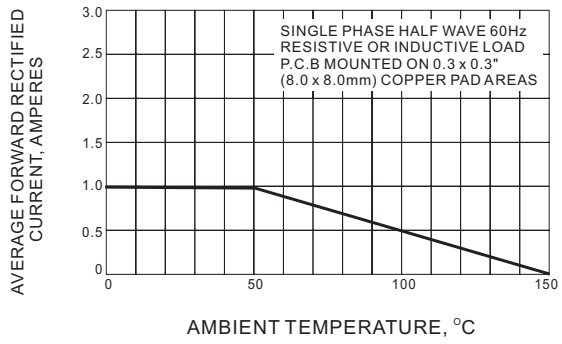



**Fig.1 FORWARD CURRENT DERATING CURVE**

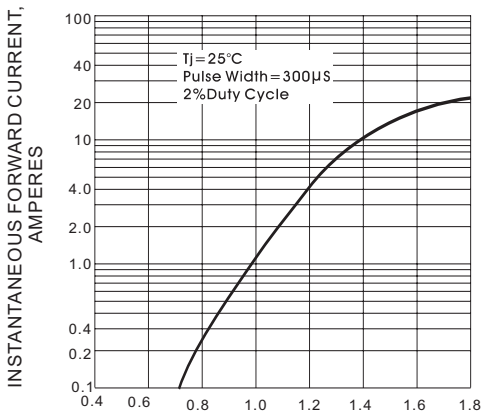



**Fig.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**

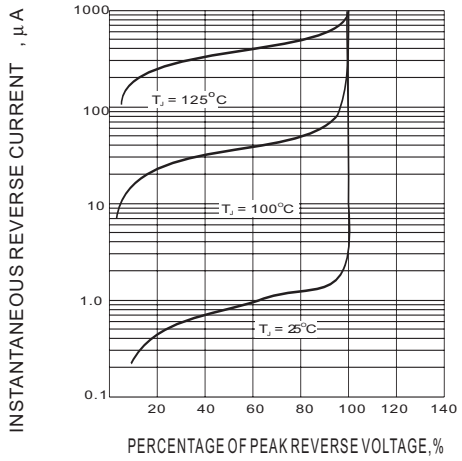



**Fig.3-TYPICAL REVERSE CHARACTERISTIC**

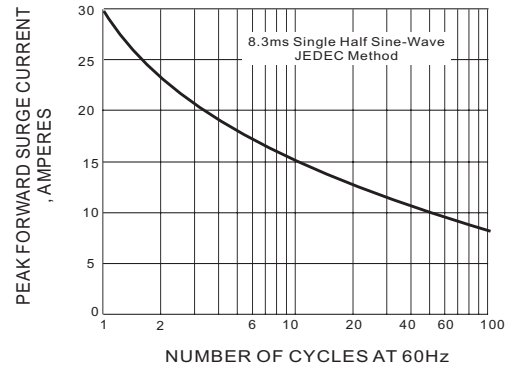



**Fig.4-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**

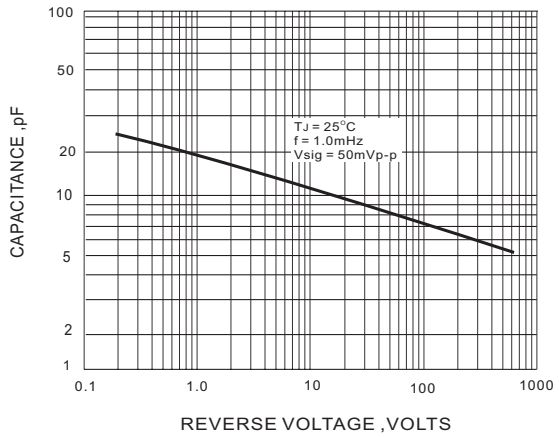



**Fig.5 TYPICAL JUNCTION CAPACITANCE**

# 1A1~1A7

## Part No_packing code_Version

1A1_AX_00001
1A1_AX_10001
1A1_AY_00001
1A1_AY_10001
1A1_B0_00001
1A1_B0_10001
1A1_R2_00001
1A1_R2_10001

## For example :

**RB500V-40_R2_00001**

- RB500V-40 — Part No.
- R2 — Packing type means T/R
- R2 — Packing size code means 13"
- 00001 — Version code means HF
- 00001 — Serial number

| Packing Code XX | | | | Version Code XXXXX | | |
|---|---|---|---|---|---|---|
| Packing type | 1st Code | Packing size code | 2nd Code | HF or RoHS | 1st Code | 2nd~5th Code |
| Tape and Ammunition Box (T/B) | A | N/A | 0 | HF | 0 | serial number |
| Tape and Reel (T/R) | R | 7" | 1 | RoHS | 1 | serial number |
| Bulk Packing (B/P) | B | 13" | 2 | | | |
| Tube Packing (T/P) | T | 26mm | X | | | |
| Tape and Reel (Right Oriented) (TRR) | S | 52mm | Y | | | |
| Tape and Reel (Left Oriented) (TRL) | L | PANASERT T/B CATHODE UP (PBCU) | U | | | |
| FORMING | F | PANASERT T/B CATHODE DOWN (PBCD) | D | | | |

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