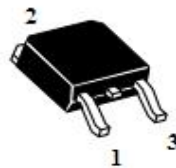


PS20U100GS&PS20U100DS

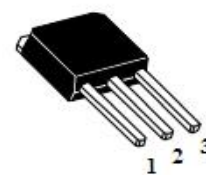
20.0AMPS. SCHOTTKY BARRIER RECTIFIERS

FEATURE

- . High current capability
- . Ultra low forward voltage drop
- . Low power loss, high efficiency
- . High surge capability
- . High temperature soldering guaranteed
260°C /10seconds, 0.25"(6.35mm)from case.



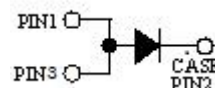
TO-252
PS20U100GS



TO-251
PS20U100DS

MECHANICAL DATA

- . Case: Molded with UL-94 Class V-0 recognized
Flame Retardant Epoxy
- . Mounting position: any



Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

MAXIMUM RATINGS (T_C=25°C unless otherwise noted)

| Parameter | Symbol | PS20U100GS&PS20U100DS | Units |
|---|-----------------------------------|-----------------------|-------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 100 | V |
| Maximum RMS Voltage | V _{RMS} | 70 | V |
| Maximum DC blocking Voltage | V _{DC} | 100 | V |
| Maximum Average Forward Rectified Current at T _C =100°C <i>Total device</i> | I _{F(AV)} | 20.0 | A |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I _{FSM} | 150.0 | A |
| Typical Junction Capacitance (Note 1) | C _J | 950 | pF |
| Operation Junction Temperature and Storage Temperature | T _J , T _{STG} | -55 to +150 | °C |

ELECTRICAL CHARACTERISTICS (T_C=25°C unless otherwise noted)

| Parameter | Symbol | Test conditions | Typ | Max | Units | |
|-------------------------|----------------|-----------------------|----------------------|------|-------|----|
| Forward voltage drop | V _F | T _J =25°C | I _F =3A | 0.44 | --- | V |
| | | | I _F =5A | 0.48 | --- | |
| | | | I _F =20A | 0.73 | 0.85 | |
| | | T _J =125°C | I _F =3A | 0.35 | --- | |
| | | | I _F =5A | 0.42 | --- | |
| | | | I _F =20A | 0.68 | 0.75 | |
| Reverse leakage current | I _R | T _J =25°C | V _R =100V | --- | 100 | μA |
| | | T _J =125°C | V _R =100V | --- | 15 | mA |

THERMAL CHARACTERISTICS (T_C=25°C unless otherwise noted)

| Parameter | Symbol | PS20U100GS | PS20U100DS | Units |
|-------------------------------------|-------------------|------------|------------|-------|
| Typical Thermal Resistance (Note 2) | R _(JC) | 6.5 | 6.5 | °C/W |

Notes:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
2. Thermal Resistance from Junction to Case

RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

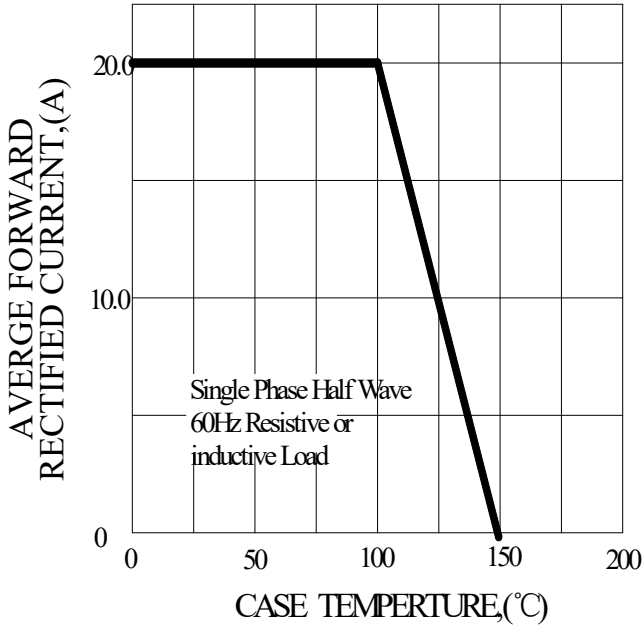


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

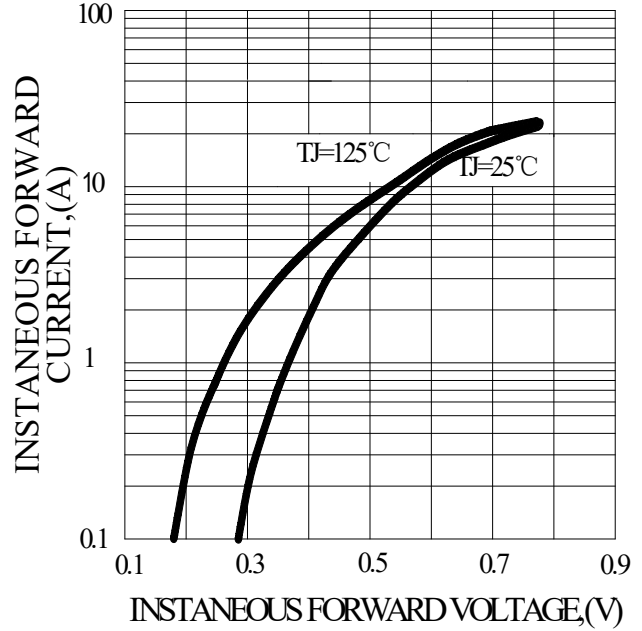


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

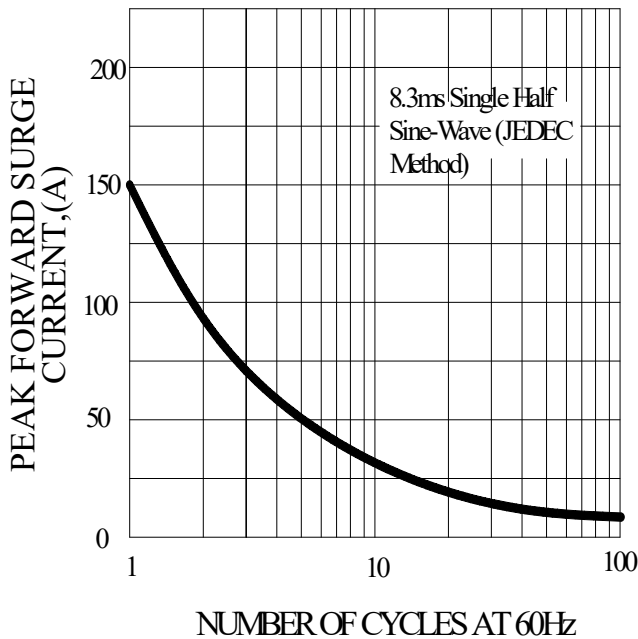
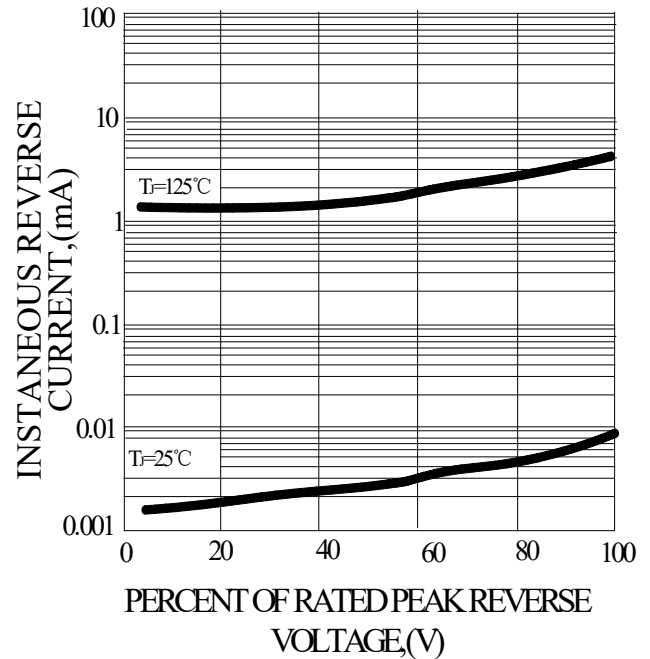
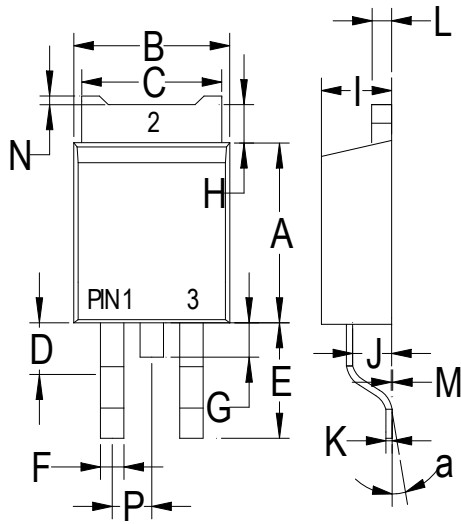


FIG.4-TYPICAL REVERSE CHARACTERISTICS



PACKAGE OUTLINE DIMENSIONS

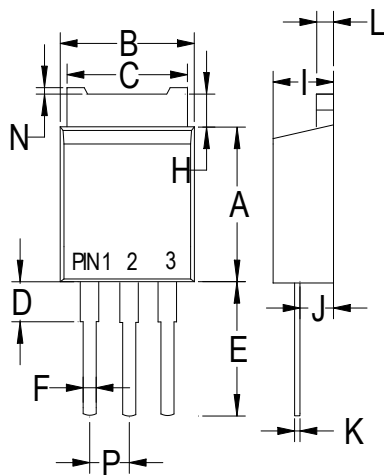
TO-252



| TO-252 | | |
|--------|-------------|-------------|
| Dim | Min | Max |
| A | .230 (5.85) | .246 (6.25) |
| B | .250 (6.35) | .264 (6.75) |
| C | .207 (5.27) | .218 (5.54) |
| D | .037 (0.93) | .045 (1.14) |
| E | .106 (2.70) | .138 (3.50) |
| F | .028 (0.72) | .033 (0.84) |
| G | .024 (0.60) | .041 (1.05) |
| H | .028 (0.72) | .043 (1.10) |
| I | .085 (2.15) | .096 (2.45) |
| J | .037 (0.95) | .047 (1.20) |
| K | .018 (0.45) | .026 (0.65) |
| L | .018 (0.45) | .024 (0.60) |
| P | .081 (2.05) | .094 (2.40) |
| M | .000 (0.00) | .006 (0.15) |
| N | -- | .008 (0.20) |
| a | 0° | 10° |

Dimensions in inches and (millimeters)

TO-251



| TO-251 | | |
|--------|-------------|-------------|
| Dim | Min | Max |
| A | .230 (5.85) | .246 (6.25) |
| B | .250 (6.35) | .266 (6.75) |
| C | .207 (5.27) | .218 (5.54) |
| D | .037 (0.93) | .045 (1.14) |
| E | .173 (4.40) | .205 (5.20) |
| F | .028 (0.72) | .033 (0.84) |
| H | .028 (0.70) | .043 (1.10) |
| I | .085 (2.15) | .096 (2.45) |
| J | .037 (0.95) | .047 (1.20) |
| K | .018 (0.45) | .026 (0.65) |
| L | .018 (0.45) | .024 (0.60) |
| N | -- | .008 (0.20) |
| P | .081 (2.05) | .094 (2.40) |

Dimensions in inches and (millimeters)