

UF3A THRU UF3K

SURFACE MOUNT ULTRAFAST RECTIFIER
VOLTAGE - 50 TO 800 Volts CURRENT - 3.0 Amperes

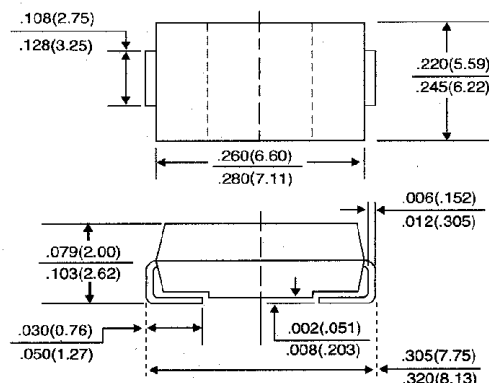
FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Ultrafast recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated junction
- High temperature soldering:
260°C/10 seconds at terminals

MECHANICAL DATA

Case: JEDEC DO-214AB molded plastic
 Terminals: Solder plated solderable per MIL-STD-750, Method 2026
 Polarity: Indicated by cathode band
 Standard Packaging: 16mm tape (EIA-481)
 Weight: 0.007 ounces, 0.21 gram

SMC/DO-214AB



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
 Resistive or inductive load.
 For capacitive load, derate current by 20%.

| | SYMBOLS | UF3A | UF3B | UF3D | UF3G | UF3J | UF3K | UNITS |
|--|----------|-------------|------|------|------|-------|------|-------|
| Maximum Recurrent Peak Reverse Voltage | VRRM | 50 | 100 | 200 | 400 | 600 | 800 | Volts |
| Maximum RMS Voltage | VRMS | 35 | 70 | 140 | 280 | 420 | 560 | Volts |
| Maximum DC Blocking Voltage | VDC | 50 | 100 | 200 | 400 | 600 | 800 | Volts |
| Maximum Average Forward Rectified Current TL = 75°C | IAV | 3.0 | | | | | | Amps |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) TA = 55°C | IFSM | 100.0 | | | | | | Amps |
| Maximum Instantaneous Forward Voltage at 3.0A | VF | 1.0 | | 1.4 | | 1.7 | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage TA = 25°C TA = 100°C | IR | 10.0 300 | | | | | | µA |
| Maximum Reverse Recovery Time (NOTE 1) TJ = 25°C | TRR | 50.0 | | | | 100.0 | | nS |
| Typical Junction Capacitance (NOTE 2) | CJ | 75.0 | | | | 63 | | pf |
| Maximum Thermal Resistance (NOTE 3) | RθJL | 15 | | | | | | °C/W |
| Operating and Storage Temperature Range | TJ, TSTG | -50 to +150 | | | | | | °C |

NOTES:

1. Reverse Recovery Test Conditions: IF = 0.5A, IR = 1.0A, Irr = 0.25A.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts.
3. 8.0mm² (.013mm thick) land areas.

RATING AND CHARACTERISTIC CURVES UF3A THRU UF3K

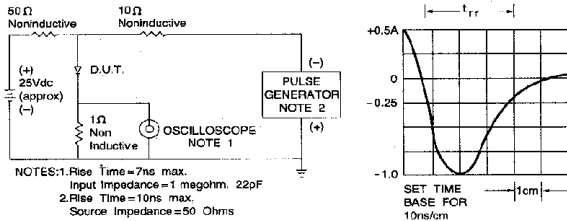


FIG. 1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

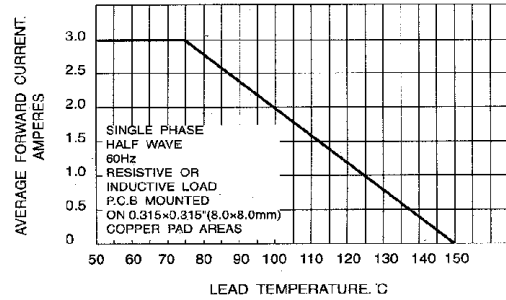


FIG. 2 - MAXIMUM AVERAGE FORWARD CURRENT RATING

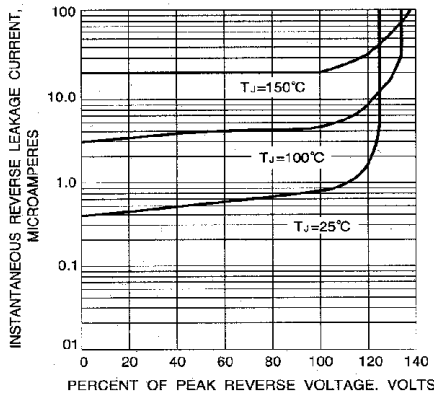


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

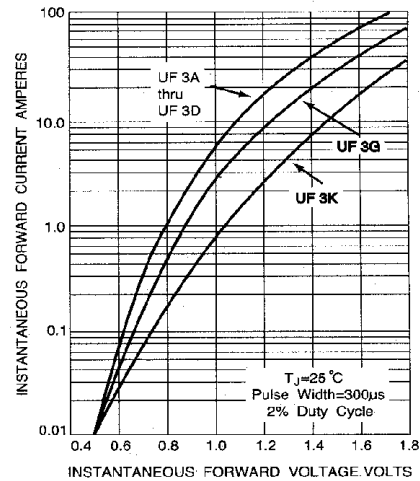


FIG. 4 - TYPICAL FORWARD CHARACTERISTICS

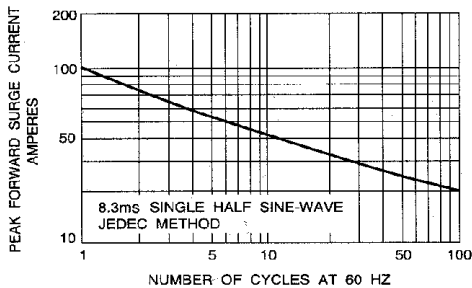


FIG. 5 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

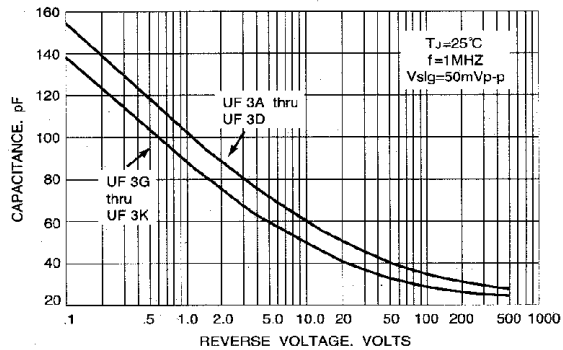


FIG. 6 - TYPICAL JUNCTION CAPACITANCE