SEMICONDUCTOR

DATA SHEET

UF3A~UF3M

SURFACE MOUNT ULTRAFAST RECTIFIER
VOLTAGE - 50 to 1000 Volts CURR ENT - 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
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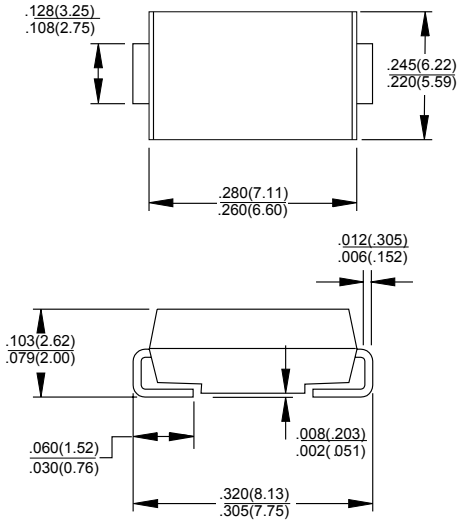
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

SMC/DO-214AB Unit:inch(mm)



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 ounce, 0.21 gram

CHARACTERISTICS	SYMBOL	UF3A	UF3B	UF3D	UF3G	UF3J	UF3K	UF3M	UNIT
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 Rectified Current @TL =75°C	$I_{(AV)}$	3.0							A
Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load (JEDEC METHOD)	I_{FSM}	100							A
Maximum forward Voltage at 1.0A DC	V_F	1.0			1.3	1.5	1.7		V
Maximum DC Reverse Current @TJ =25°C at Rated DC Blocking Voltage @TJ =100°C	I_R	10 100							uA
Maximum Reverse Recovery Time (Note 1)	T_{RR}	50				75			ns
Typical Junction Capacitance (Note 2)	C_J	20				10			pF
Typical Thermal Resistance (Note 3)	$R_{\theta JL}$	30							°C/W
Operating Temperature Range	T_J	-55 to +150							°C
Storage Temperature Range	T_{STG}	-55 to +150							°C

NOTES : 1.Reverse Recovery Test Conditions :IF=0.5A,IR=1.0A,IRR=0.25A.
2.Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3.Thermal Resistance junction to Lead.

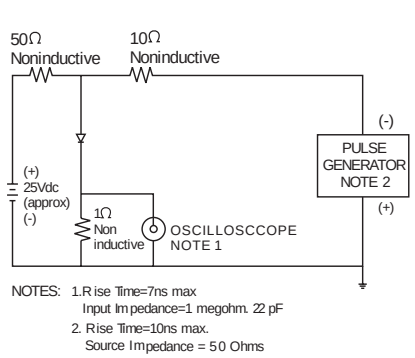


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

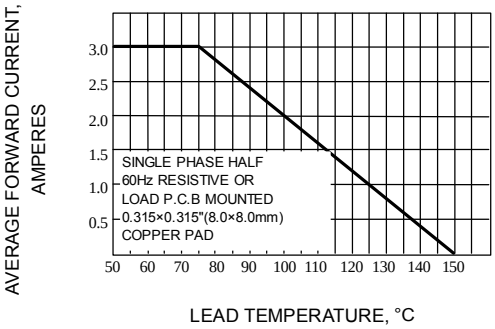


Fig. 2-MAXIMUM AVERAGE FORWARD CURRENT RATING

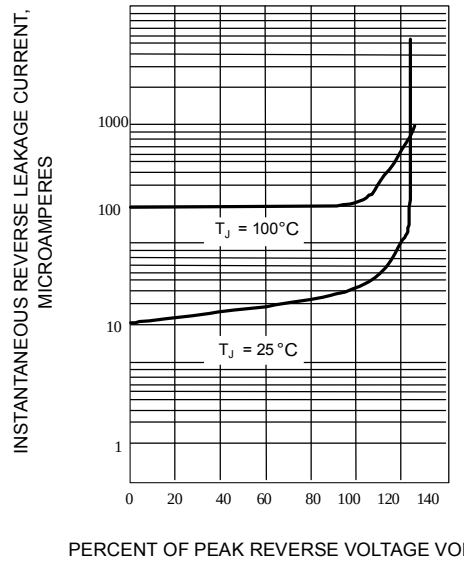


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

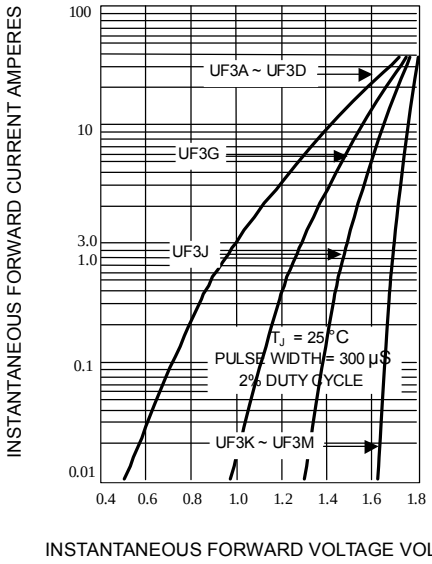


Fig. 4-TYPICAL FORWARD CHARACTERISTICS

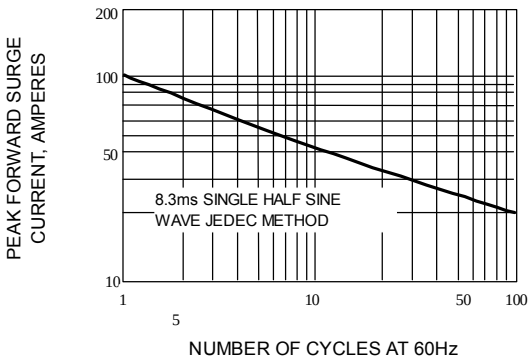


Fig. 5-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

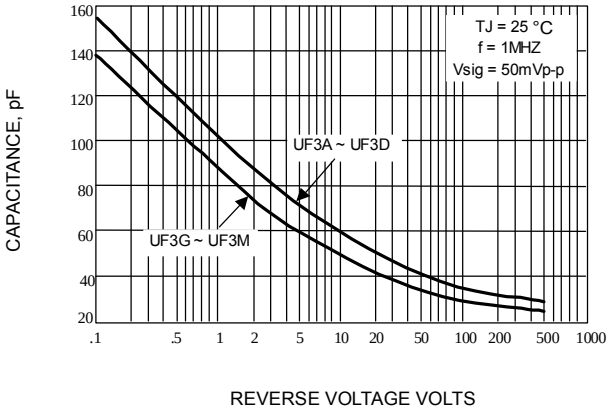


Fig. 6-TYPICAL JUNCTION CAPACITANCE