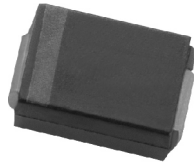


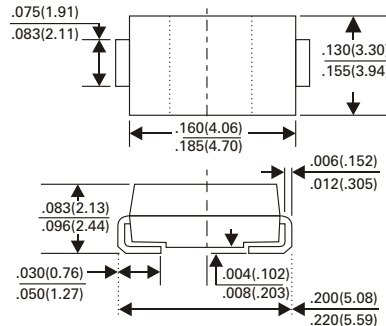
US1AB thru US1MB

SURFACE MOUNT REVERSE VOLTAGE 50 TO 1000 VOLTS

ULTRA FAST RECTIFIERS FORWARD CURRENT - 1.0 AMPERES



SMB/DO-214AA



Dimensions in inches and (millimeters)

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-0
- Glass passivated junction
- High temperature soldering : 260°C/10seconds at terminals

MECHANICAL DATA

Case : JEDEC DO-214AA molded plastic
 Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
 Polarity : Indicated by cathode band
 Standard Packaging : 12mm tape (ELA-481)
 Weight : 0.003 ounce, 0.093grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOL	US1AB	US1BB	US1DB	US1GB	US1JB	US1KB	US1MB	UNITS
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current @ $T_L = 100^\circ\text{C}$	$I_{(AV)}$	1.0							Amps
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) $T_A = 55^\circ\text{C}$	I_{FSM}	30							Amps
Maximum Instantaneous Forward Voltage at 1.0A DC	V_F	1.0		1.3	1.5	1.7		Volts	
Maximum DC Reverse Current @ $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	I_R	10 100							μA
Typical Junction Capacitance (NOTE 2)	C_J	17							pF
Maximum Reverse Recovery Time (NOTE 1) $T_J = 25^\circ\text{C}$	T_{RR}	50					75		nS
Maximum Thermal Resistance (NOTE 3)	$R_{\theta JC}$	30							$^\circ\text{C} / \text{W}$
Operating and Storage Temperature Range	T_J T_{STG}	-50 to +150							$^\circ\text{C}$

NOTES :

1. Reverse Recovery Test Conditions $I_F = 5\text{A}$, $I_R = 1\text{A}$, $I_{RR} = 0.25\text{A}$
2. Measured at 1 MHz and applied reverse voltage of 4.0VDC
3. 8.3mm^2 (0.13mm thick) land areas.

US1AB thru US1MB

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RATINGS AND CHARACTERISTIC CURVES US1AB THRU US1MB

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

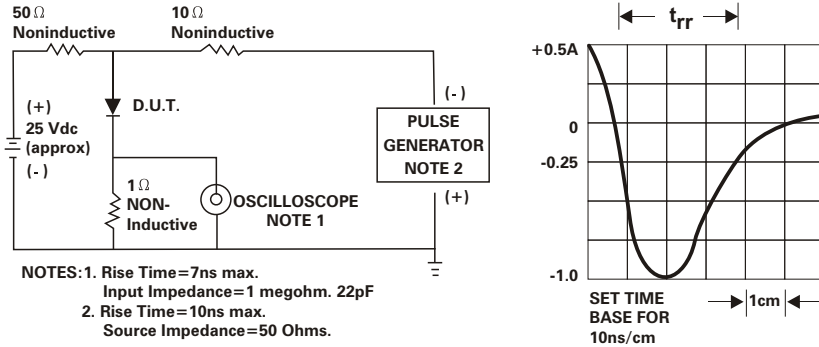


Fig. 2 - FORWARD CHARACTERISTICS

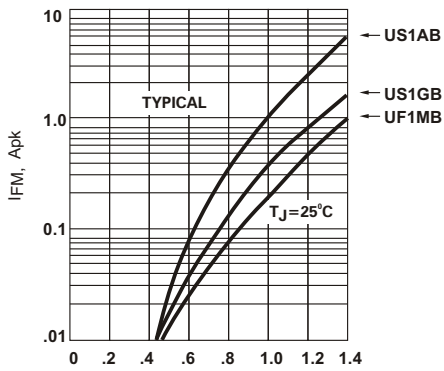


Fig. 3 - TYPICAL JUNCTION CAPACITANCE

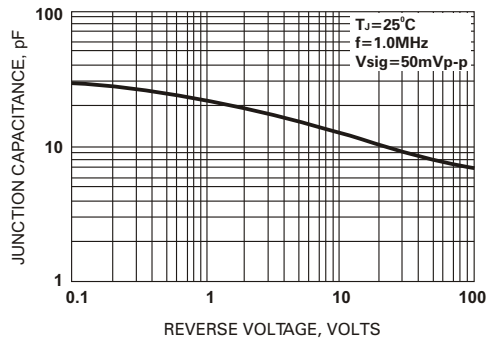


Fig. 4 - FORWARD CURRENT DERATING CURVE

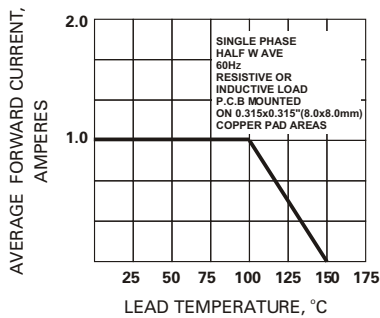


Fig. 5 - PEAK FORWARD SURGE CURRENT

