

MURS140

SURFACE MOUNT ULTRA FAST RECTIFIERS

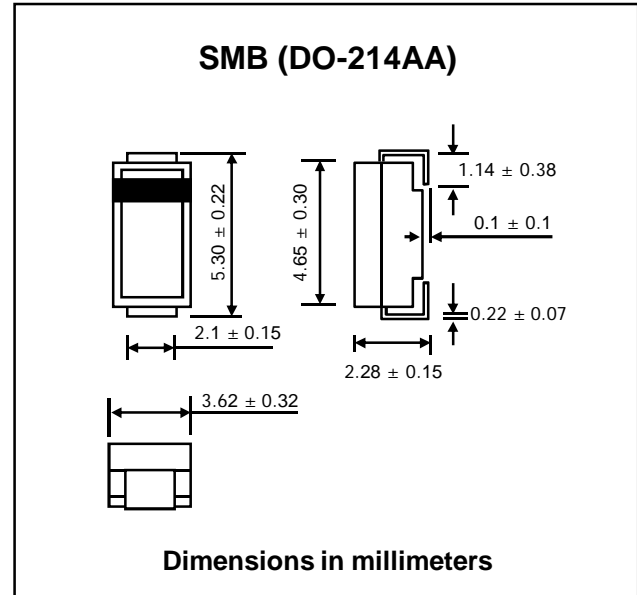
PRV : 400 Volts
Io : 1.0 Ampere

FEATURES :

- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * Ultra Fast Recovery Time
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : SMB Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Lead : Lead Formed for Surface Mount
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 0.093 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

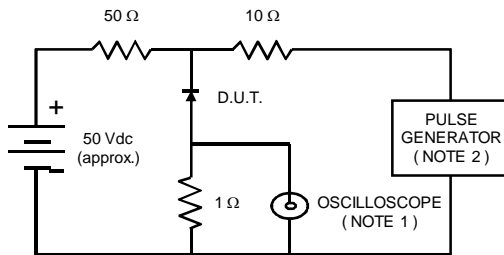
RATING	SYMBOL	VALUE	UNIT	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	400	V	
Maximum Working Peak Reverse Voltage	V_{RWM}	400	V	
Maximum DC Blocking Voltage	V_{DC}	400	V	
Maximum Average Forward Current $T_L = 150\text{ °C}$ See Fig. 1 $T_L = 125\text{ °C}$	$I_{F(AV)}$	1.0 2.0	A	
Maximum Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	35	A	
Maximum instantaneous Forward Voltage (1)	V_F	at $I_F = 1.0A, T_J = 25\text{ °C}$ at $I_F = 1.0A, T_J = 150\text{ °C}$	1.25 1.05	V
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage(1)		I_R	5	μA
Current at Rated DC Blocking Voltage(1)	$I_{R(H)}$	150	μA	
Maximum Reverse Recovery Time (2)	T_{rr}	50	ns	
Operating Junction and Storage Temperature Range	T_J, T_{STG}	- 65 to + 175	$^{\circ}C$	

Notes :

- (1) Pulse Test : Pulse Width = 300 μs , Duty Cycle $\leq 2.0\%$
- (2) Reverse Recovery Test Conditions : $I_F = 0.5A, I_R = 1A ; I_{rr} = 0.25 A$

RATING AND CHARACTERISTIC CURVES (MURS140)

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



- NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.
2. Rise Time = 10 ns max., Source Impedance = 50 ohms.
3. All Resistors = Non-inductive Types.

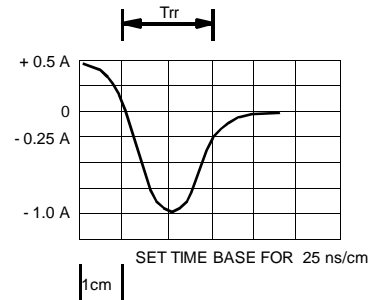


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

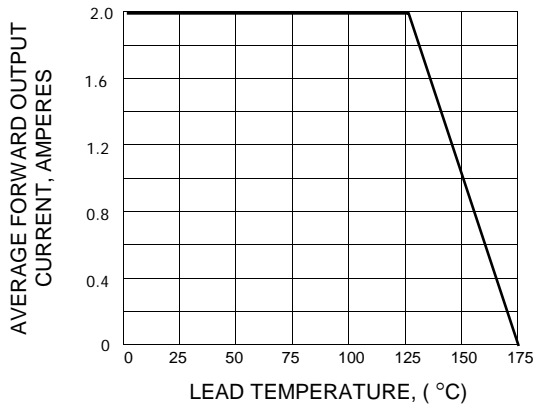


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

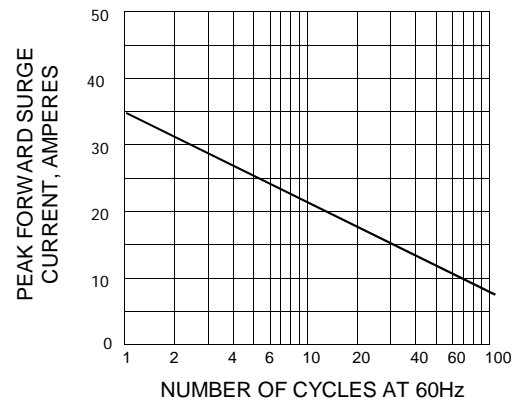


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

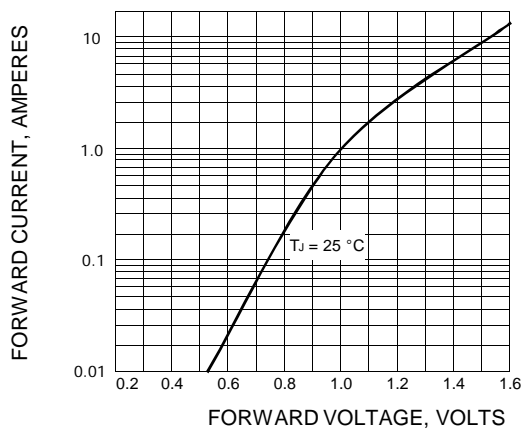


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

