

SMF6533

FAST RECOVERY RECTIFIER DIODE

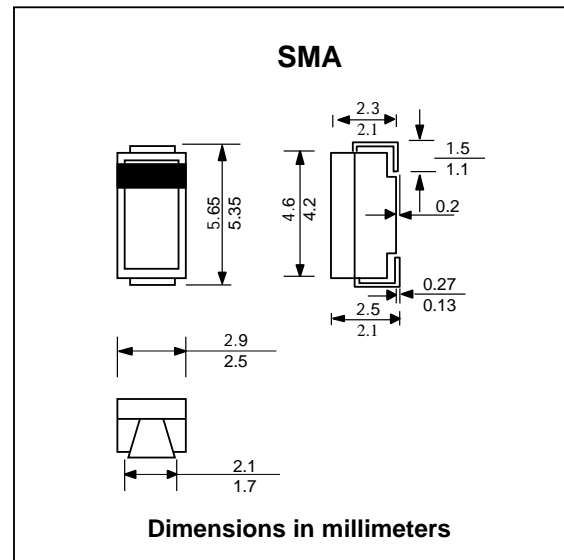
PRV : 5000 Volts
Io : 0.05 Ampere

FEATURES :

- * Glass passivation chip
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * Fast switching for high efficiency
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : SMA Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 0.060 gram (Approximately)



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%.

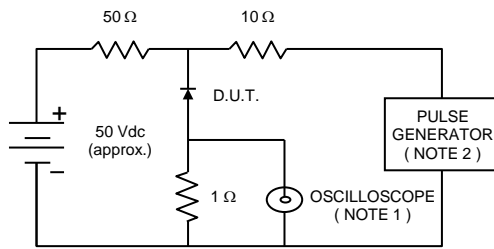
RATING	SYMBOL	VALUE	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	5000	V
Maximum RMS Voltage	V_{RMS}	3500	V
Maximum DC Blocking Voltage	V_{DC}	5000	V
Maximum Average Forward Current $T_c = 55\text{ }^\circ\text{C}$	$I_{F(AV)}$	0.05	A
Maximum Peak Forward Surge Current	I_{FSM}	4	A
Maximum Peak Forward Voltage at 0.025 A	V_F	5.0	V
Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 100\text{ }^\circ\text{C}$	I_R	1.0	μA
	$I_{R(H)}$	10	μA
Reverse Recovery Time (Note 1)	T_{rr}	70	ns
Junction Capacitance (Note 2)	C_J	3	pF
Junction Temperature Range	T_J	- 65 to + 175	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 65 to + 200	$^\circ\text{C}$

Notes :

- (1) Reverse Recovery Test Conditions : $I_F = 12.5\text{ mA}$, $I_R = 25.0\text{ mA}$, $I_{rr} = 6.3\text{ mA}$.
- (2) Measured at 1.0 MHz and applied reverse voltage of 2.0 Vbc

RATING AND CHARACTERISTIC CURVES (SMF6533)

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.

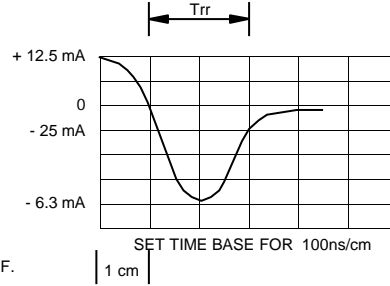


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

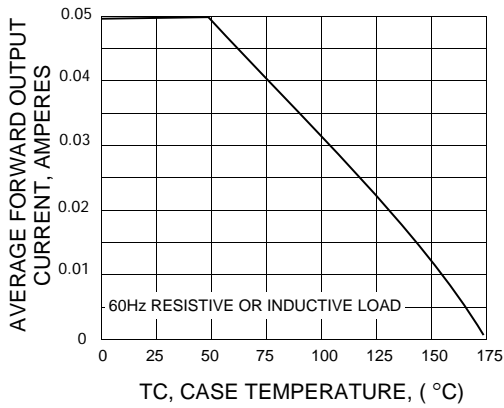


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

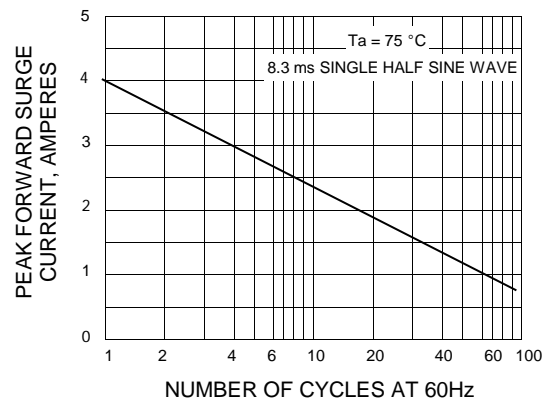


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

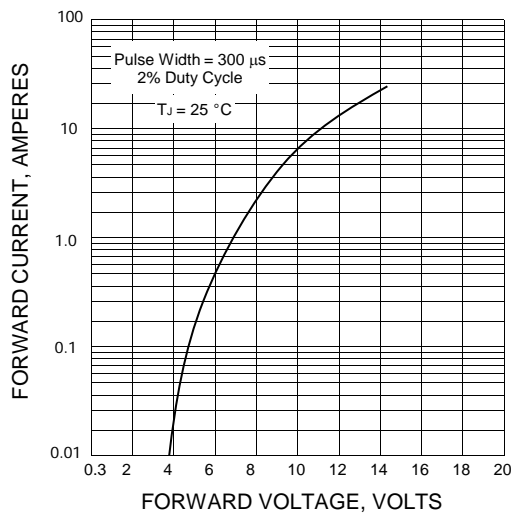


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

