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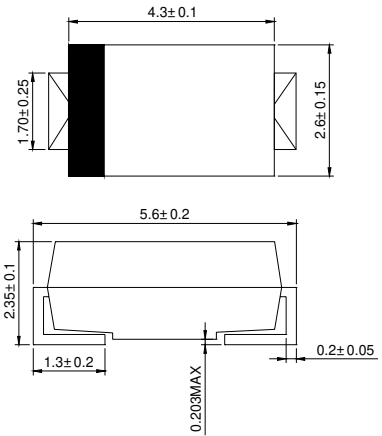
elektronikai alkatrész áruház

**EN:** This Datasheet is presented by the manufacturer.

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### SMAJ



Dimensions in millimeters

### Features

- ✦ For surface mounted application
- ✦ Glass passivated junction chip.
- ✦ Low forward voltage drop
- ✦ High current capability
- ✦ Easy pick and place
- ✦ High surge current capability
- ✦ Plastic material used carries Underwriters Laboratory Classification 94V-0
- ✦ High temperature soldering:  
260°C / 10 seconds at terminals

### Mechanical Data

- ✦ Case: Molded plastic
- ✦ Polarity: Indicated by cathode band
- ✦ Packaging: 12mm tape
- ✦ Weight: 0.084 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%

Type Number	Symbol	M1	M2	M3	M4	M5	M6	M7	Units
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 @ $T_L = 110^\circ\text{C}$	$I_{(AV)}$	1.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	30							A
Maximum Instantaneous Forward Voltage @ 1.0A	$V_F$	1.1							V
Maximum DC Reverse Current @ $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$	$I_R$	1.0 50							$\mu\text{A}$ $\mu\text{A}$
Typical Reverse Recovery Time (Note 1)	$T_{rr}$	1.5							$\mu\text{s}$
Typical Junction Capacitance ( Note 2 )	$C_j$	12							pF
Non-Repetitive Peak Reverse Avalanche Energy at 25°C, $I_{AS}=1\text{A}$ , $L=10\text{mH}$	$E_{AS}$	5							mJ
Typical Thermal Resistance (Note 3)	$R_{\theta JL}$ $R_{\theta JA}$	27 75					30 85		$^\circ\text{C/W}$
Operating Temperature Range	$T_J$	-55 to +150							$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150							$^\circ\text{C}$

- Notes:
1. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$
  2. Measured at 1 MHz and Applied  $V_a=4.0$  Volts
  3. Measured on P.C. Board with 0.2" x 0.2" (5.0mm x 5.0mm) Copper Pad Areas.

### RATINGS AND CHARACTERISTIC CURVES (M1 THRU M7)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

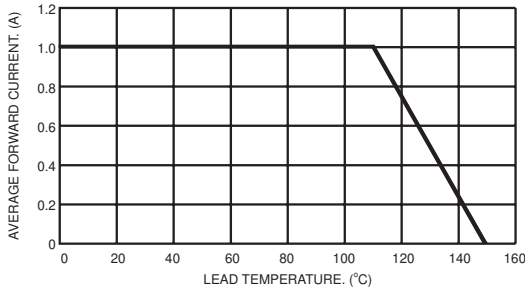


FIG.2- TYPICAL REVERSE CHARACTERISTICS

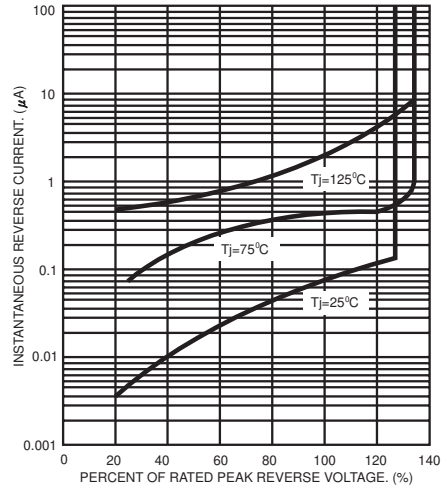


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

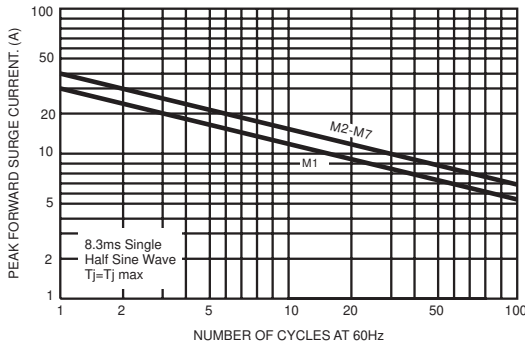


FIG.5- TYPICAL FORWARD CHARACTERISTICS

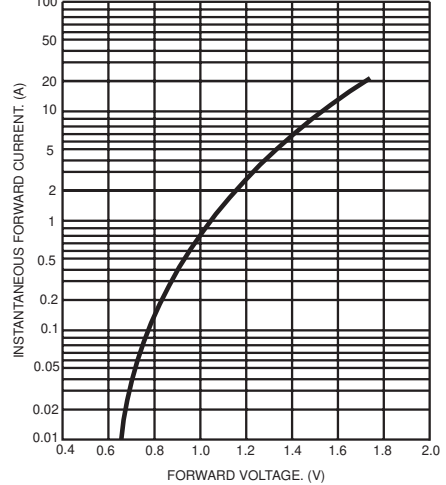


FIG.4- TYPICAL JUNCTION CAPACITANCE

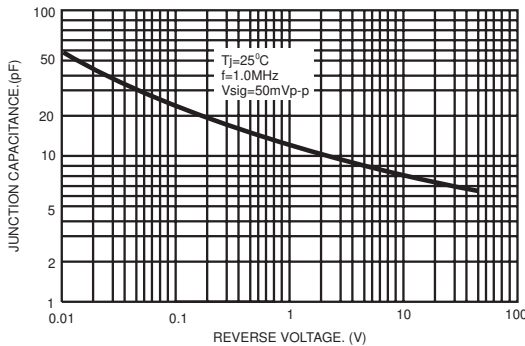
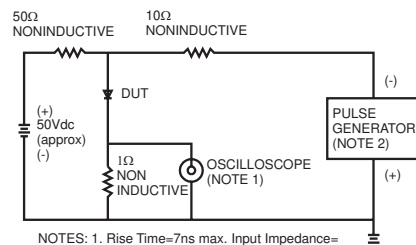


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1. Rise Time=7ns max. Input Impedance=1 megohm 22pf  
2. Rise Time=10ns max. Source Impedance=50 ohms

