TES1A THRU TES1J

Voltage Range 50 to 600 V

Current 1.0 Ampere

Features

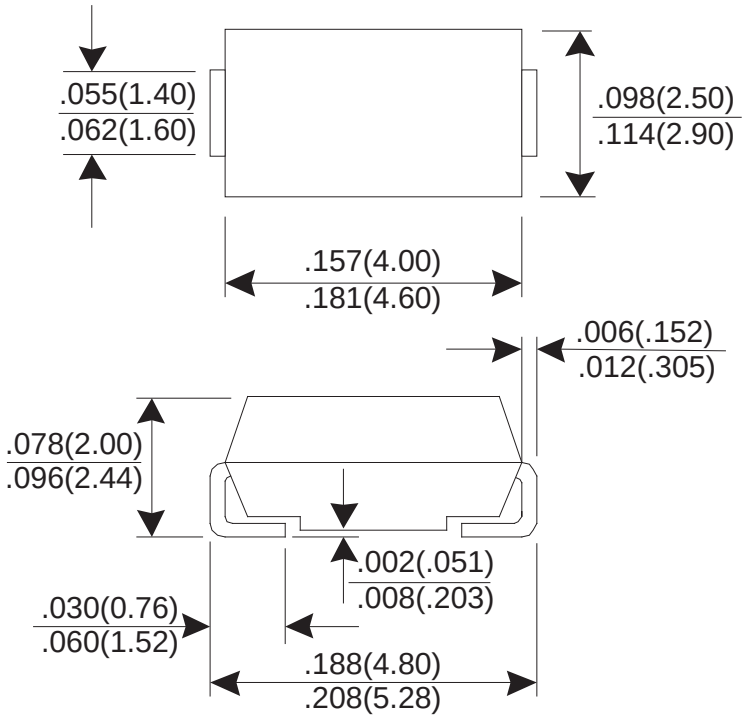
- ✶ Fast switching for high efficiency
- ✶ Low forward voltage drop
- ✶ High current capability
- ✶ Low reverse leakage current
- ✶ High surge current capability
- ✶ Glass passivated chip

Mechanical Data

- ✶ Case: Molded plastic SMA/DO-214AC
- ✶ Epoxy: UL 94V-0 rate flame retardant
- ✶ Terminals: Solderable per MIL-STD-750 method 2026
- ✶ Polarity:Color band denotes cathode
- ✶ Mounting position: Any
- ✶ Weight: 0.064 gram

Dimensions in inches and (millimeters)

SMA/DO-214AC



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

PARAMTER	SYMBOL	TES1A	TES1B	TES1D	TES1G	TES1J	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	V
Maximum Average Forward Rectified Current T_A=55°C	$I_{F(AV)}$	1.0					A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30					A
Maximum Instantaneous Forward Voltage @ 1.0 A	V_F	0.92			1.3	1.5	V
Maximum DC Reverse Current @T_J=25°C At Rated DC Blocking Voltage @T_J=125°C	I_R	5.0 100					uA uA
Maximum Reverse Recovery Time (Note 1)	Trr	15			25	50	nS
Typical junction Capacitance (Note 2)	C_J	15					pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	75					°CW
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150					°C

NOTES : (1) Reverse recovery test conditions I_F = 0.5A, I_R = 1.0A, Irr = 0.25A.
(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.
(3) Thermal Resistance junction to ambient.

RATING AND CHARACTERISTIC CURVES

FIG.1 - FORWARD CURRENT DERATING CURVE

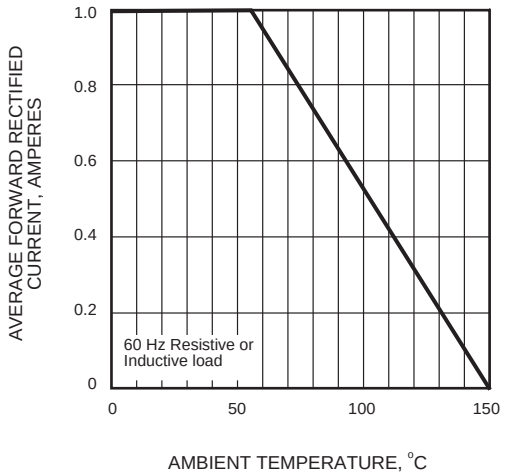


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

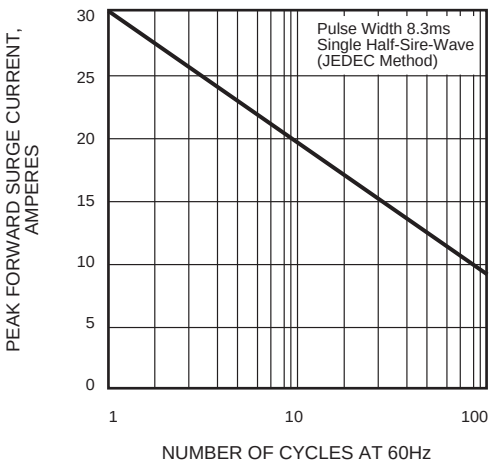


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

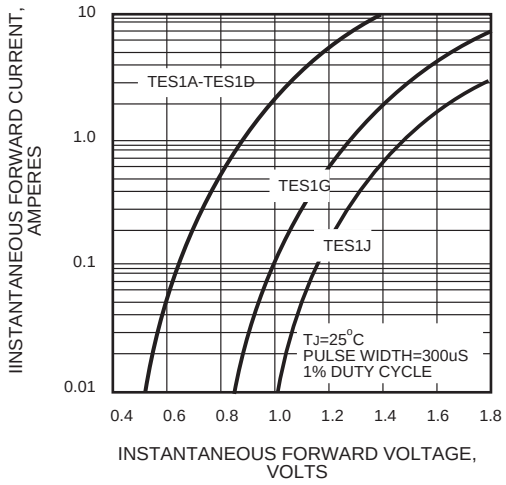


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

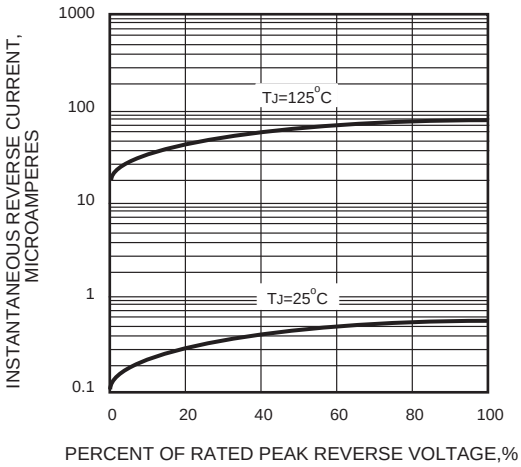


FIG.5 - TYPICAL JUNCTION CAPACITANCE