SURFACE MOUNT SUPER FAST RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 5.0 Amperes

FEATURES

- Plastic package has Underwrites Laboratory Flammability Classification 94V-0
- Metal-Silicon Junction
- For surface mount applications
- Guard ring for over voltage protection
- High forward surge current capability
- Super Low forward voltage
- High temperature soldering guaranteed: 260℃/10 seconds at terminals

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-O rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-750 method 2026
- Mounting position: Surface Mounted
- Weight: 0.003 ounce, 0.093 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25^{O}C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

		SYMBOLS	ES5AB	ES5BB	ES5DB	ES5GB	ES5JB	ES5KB	ES5MB	UNIT
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	720	Volts
Maximum DC Blocking Voltage		V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current		$I_{(AV)}$	5.0							Amp
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load		I_{FSM}	150							Amps
Maximum Instantaneous Forward Voltage at 5.0A (Note 1)		V_F	0.95			1.25	1.68			Volts
Maximum DC Reverse Current at rated DC Blocking Voltage	T_A = 25℃	I_R	5							u A
	T_A = 100℃		100							
Maximum reverse recovery time(Note 2)		Trr	35							ns
Operating Temperature Range		T_J	-55 to +150							℃
Storage Temperature Range		T_{STG}	-55 to +150							℃

Notes:

1. Pulse test: 300μs pulse width, 1% duty cycle
2. Test conditions : IF=0.5A,IR=1.0A,IRR=0.25A

RATINGS AND CHARACTERISTIC CURVES

FIG. 1- FORWARD CURRENT DERATING CURVE

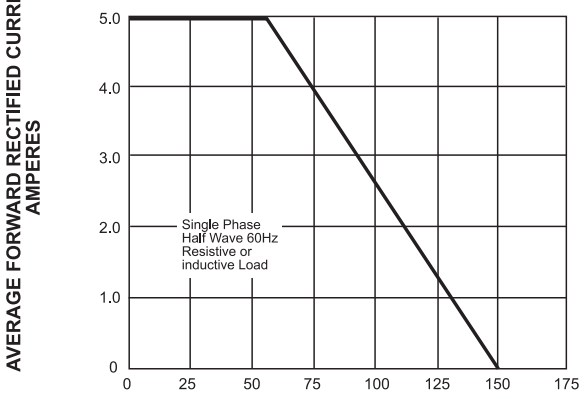


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

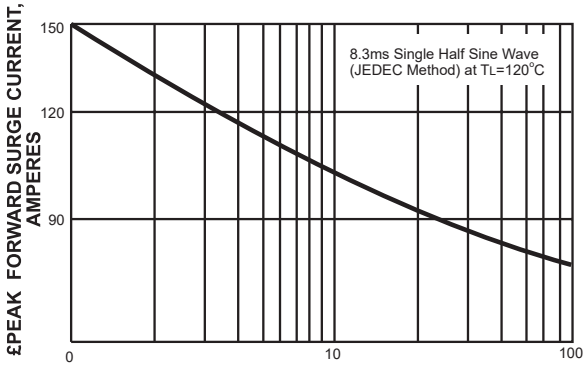


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

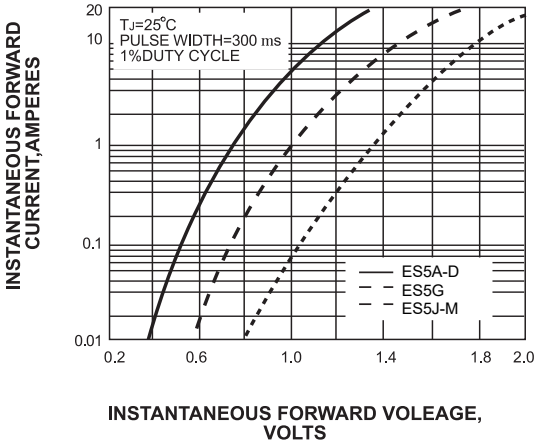


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

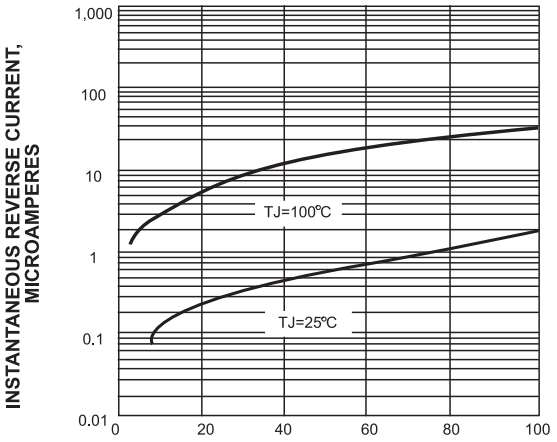


FIG. 5-TYPICAL JUNCTION CAPACITANCE

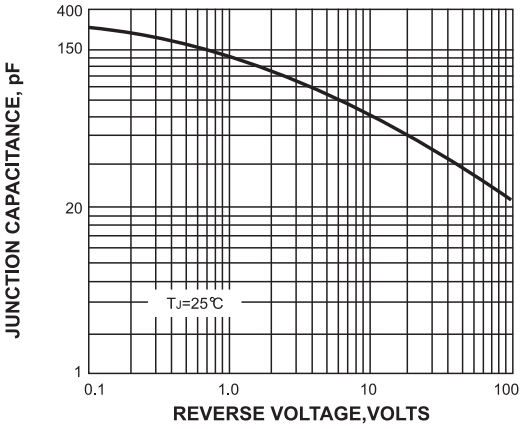
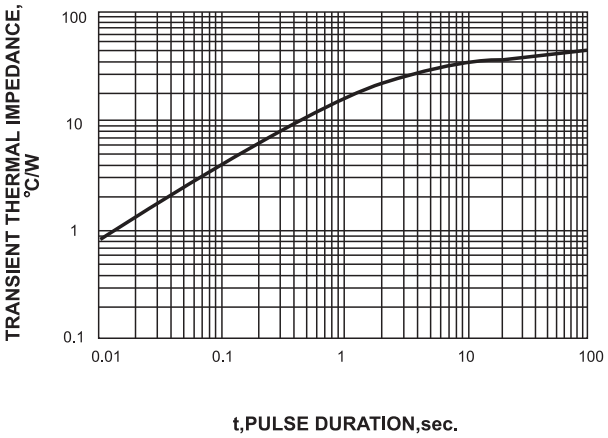


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



OUTLINE DIMENSION

All Dimension in inches and (millimeters)

SMB(DO-214AA)

