



WEE Technology Company Limited

Ultra-Fast Recovery Rectifiers

ES1A THRU ES1J

VOLTAGE RANGE 50 to 600 Volts

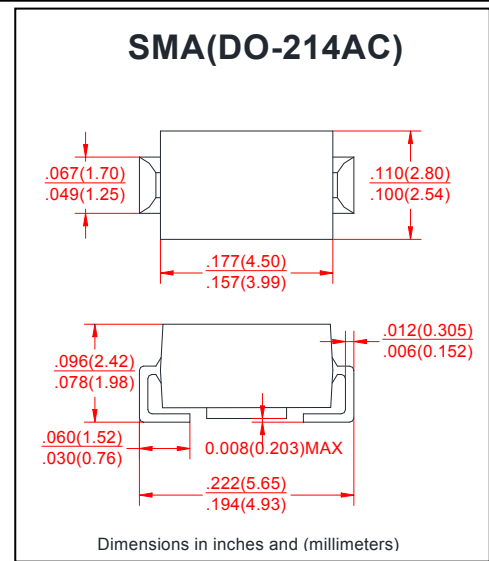
CURRENT 1.0 Ampere

FEATURES

- Low forward voltage drop
- Low leakage current
- High forward surge capability

MECHANICAL DATA

- Case: SMA mold plastic
- Epoxy: UL94V-0 rate flame retardant
- Polarity: Indicated by cathode band
- Lead: Solder plated, solderable per MIL-STD-750, METHOD 2026
- Mounting position: Any



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOLS	ES1A	ES1B	ES1C	ES1D	ES1G	ES1J	UNITS
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	400	600	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	280	420	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	400	600	Volts
Maximum Average Forward Rectified Current at $T_A=55^\circ\text{C}$	$I_{(AV)}$	1.0						Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30						Amps
Maximum Instantaneous Forward Voltage at 1.0A	V_F	0.95				1.25	1.7	Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	$T_A = 25^\circ\text{C}$						μA
		$T_A = 100^\circ\text{C}$						
Maximum Reverse Recovery Time(NOTE1)	T_{RR}	35						ns
Typical Junction Capacitance (NOTE 2)	C_J	15						pF
Typical Thermal Resistance (NOTE 3)	$R_{\theta JA}$	55						$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_J, 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 1.0MHz and applied reverse voltage of 4.0 Volts.
- 3.Thermal Resistance from Junction to Ambient at. $5.0 \times 5.0\text{mm}^2$ copper pad areas.



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FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

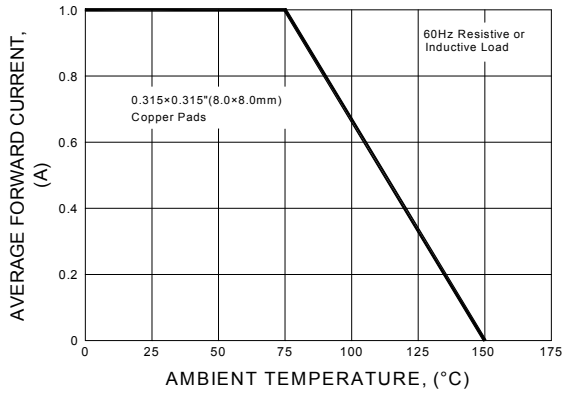


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

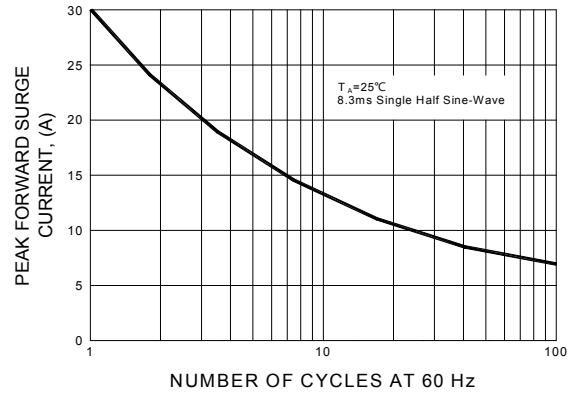


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

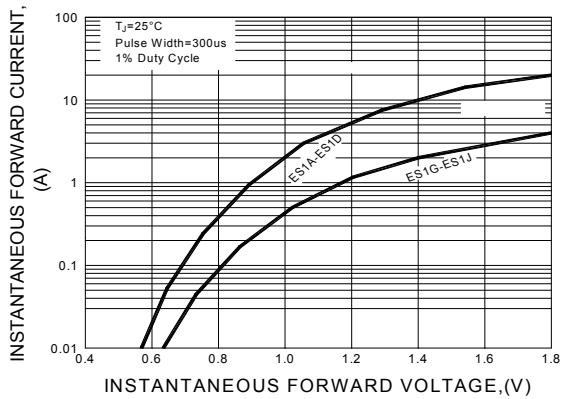


FIG.4-TYPICAL REVERSE CHARACTERISTICS

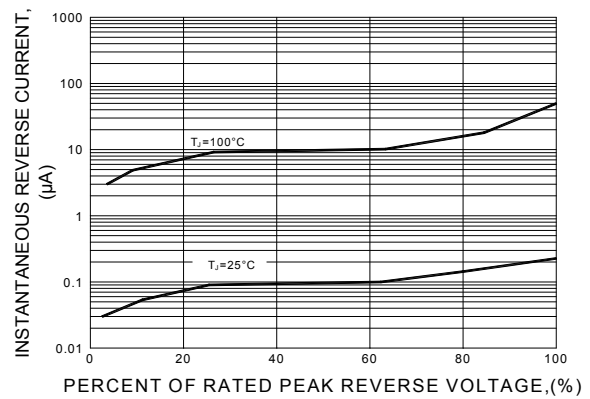
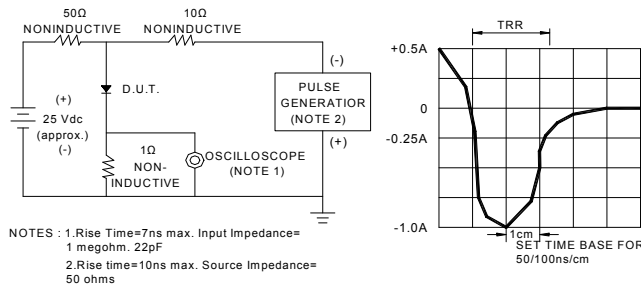


FIG.6-TEST CIRCUIT DIAGRAM AND FORWARD SURGE CURRENT



CAPACITANCE, (pF)

Note: Specifications are subject to change without notice. For more detail and update, please visit our website.