

ES1A THRU ES1J

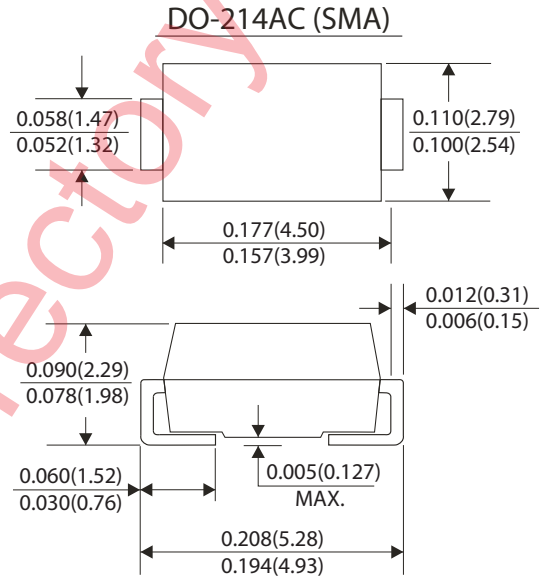
CURRENT 1.0 Ampere
VOLTAGE 50 to 400 Volts

Features

- For surface applications in order to optimize board space
- Low profile package
- Built-in strain relief, ideal for automated placement
- Super fast recovery time
- Glass passivated junction
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes
- Low forward voltage drop
- Glass passivated chip junction
- High temperature soldering guaranteed : 250 °C/10 seconds, at terminals

Mechanical Data

- Case : JEDEC SMA(DO-214AC) molded plastic body
- Terminals : Plated axial lead solderable per MIL-STD-750, method 2026
- Polarity : Color band denotes cathode end
- Mounting Position : Any
- Weight : 0.002 ounce, 0.064 gram



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 by 20%)

	Symbols	ES1A	ES1B	ES1C	ES1D	ES1G	ES1J	Units
Maximum recurrent peak reverse voltage	V _{RRM}	50	100	150	200	400	600	Volts
Maximum RMS voltage	V _{RMS}	35	70	105	140	380	420	Volts
Maximum DC blocking voltage	V _{DC}	50	100	150	200	400	600	Volts
Maximum average forward rectified current at T _L =120 °C	I _(AV)	1.0						Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	30.0						Amps
Maximum instantaneous forward voltage at 1.0A	V _F	0.95			1.25			Volts
Maximum reverse current at rated voltage	T _A =25 °C	5.0						μA
	T _A =100 °C	100						
Maximum reverse recovery time (Note 1)	T _{rr}	35						ns
Typical thermal resistance (Note 3)	R _{θJL}	35.0						°C/W
	R _{θJA}	85.0						
Typical junction capacitance (Note 2)	C _J	7.0						pF
Operating junction and storage temperature range	T _J T _{STG}	-55 to +150						°C

Notes:

- (1) Test conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A.
- (2) Measured at 1MHz and applied reverse voltage of 4.0 Volts.
- (3) P.C.B mounted on 0.2×0.2"(5.0×5.0mm) copper pad areas

RATINGS AND CHARACTERISTIC CURVES ES1A THRU ES1J

FIG.1-FORWARD CURRENT DERATING CURVE

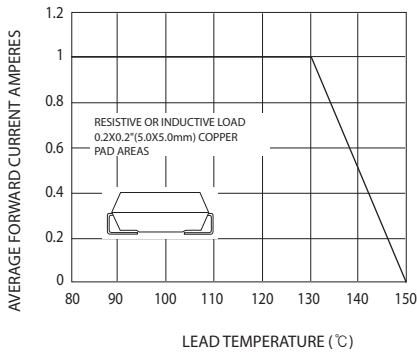


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

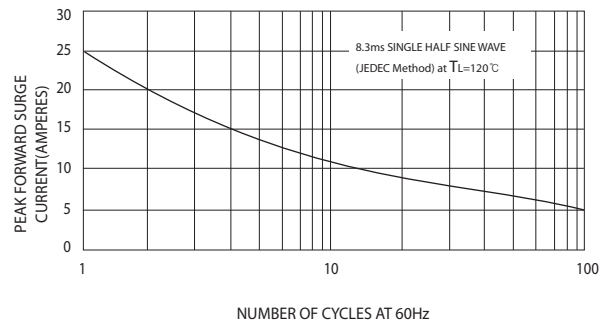


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

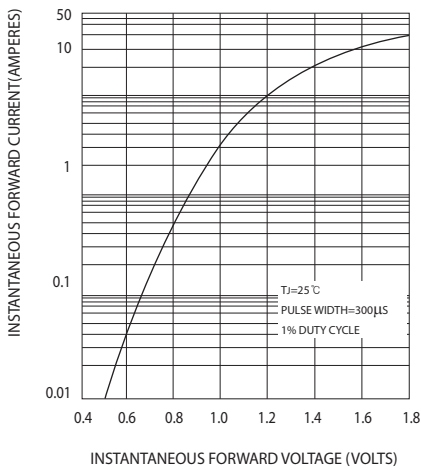


FIG.4-TYPICAL REVERSE CHARACTERISTICS

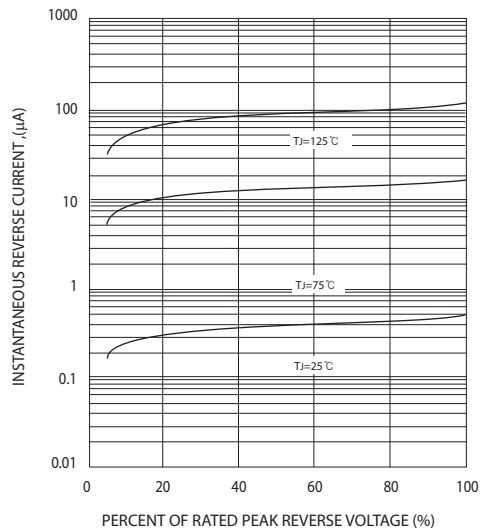


FIG.5-TYPICAL JUNCTION CAPACITANCE

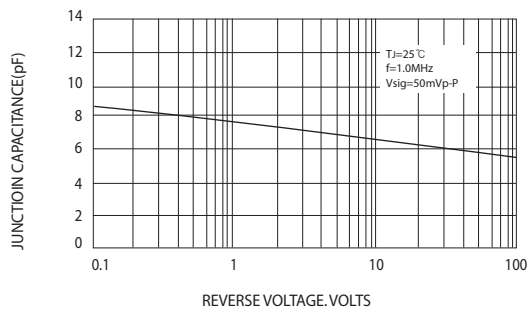
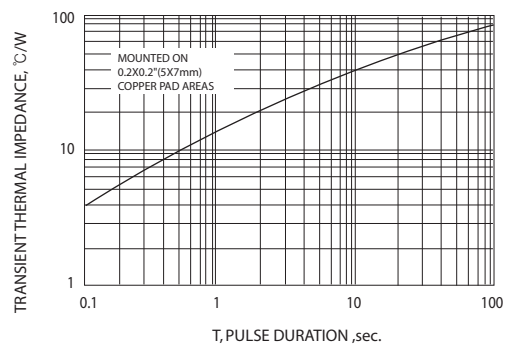


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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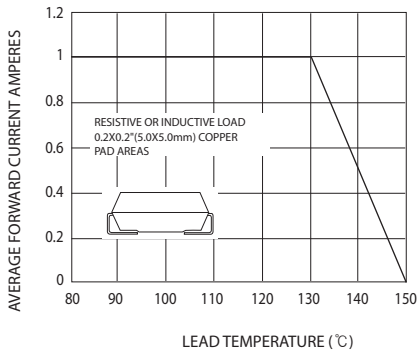


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

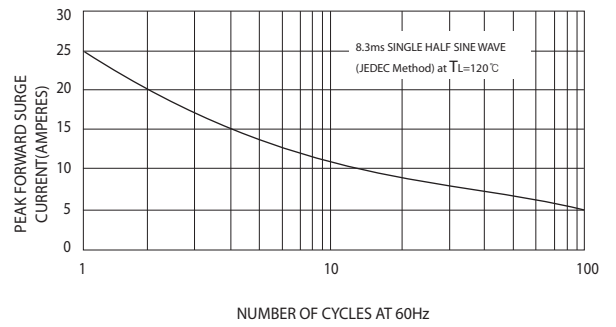


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

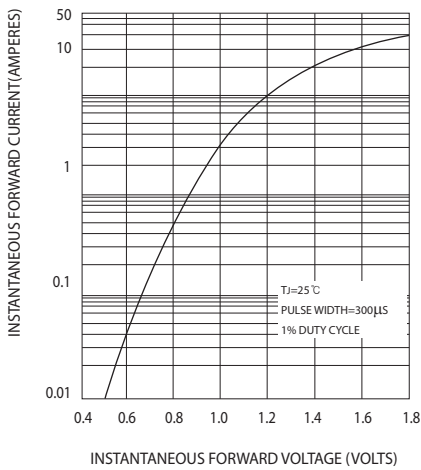


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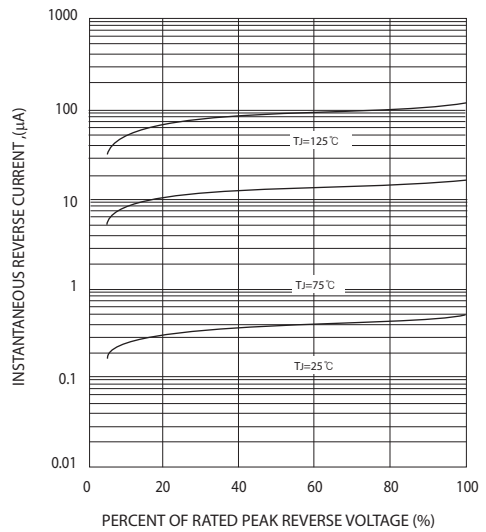


FIG.5-TYPICAL JUNCTION CAPACITANCE

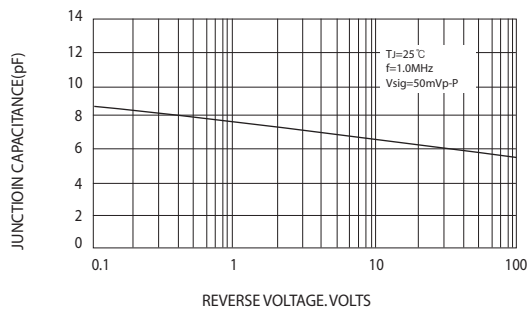


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