SAMYANG ELECTRONICS

ES1A --- ES1J

SUPER FAST RECTIFIERS

VOLTAGE RANGE: 50 --- 600 V
CURRENT: 1.0A

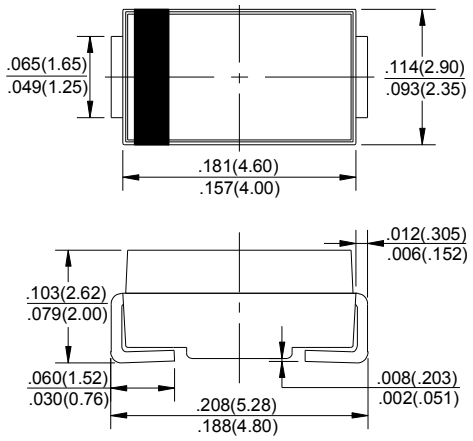
FEATURES

- ◇Metal-semiconductor junction with guard ring
- ◇Epitaxial construction
- ◇Low forward voltage drop,low switching losses
- ◇High surge capability
- ◇For use in low voltage,high frequency inverters free wheeling,and polarity protection applications
- ◇The plastic material carries U/L recognition 94V-0

MECHANICAL DATA

- ◇Case:JEDEC SMA ,molded plastic
- ◇Terminals: Axial lead ,solderable per MIL- STD-750,Method 2026
- ◇Polarity: Indicated by cathode band
- ◇Weight: 0.002 ounces, 0.053grams
- ◇Mounting position: Any

SMA



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

Single phase,half wave,60 Hz,resistive or inductive load. For capacitive load,derate by 20%.

CHARACTERISTICS	SYMBOL	ES1A	ES1B	ES1D	ES1G	ES1J	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 ℃	$I_{(AV)}$	1.0					A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load(JEDEC Method)	I_{FSM}	30					A
Peak Forward Voltage at 1.0A DC	V_F	0.95			1.3	1.70	V
Maximum DC Reverse Current @T_J=25℃ at Rated DC Blocking Voltage @T_J=100℃	I_R	5.0 100					μA
Maximum Reverse Recovery Time(Note 1)	T_{RR}	35					nS
Typical Junction Capacitance (Note2)	C_J	30			25		pF
Typical Thermal Resistance (Note3)	$R_{\theta JA}$	40					℃ / W
Operating Temperature Range	T_J	-55 to +150					℃
Storage Temperature Range	T_{STG}	-55 to +150					℃

NOTE: 1. Pulse test:300us pulse width,1% duty cycle.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3.Thermal resistance junction to ambient

www.diode.co.kr

FIG. 1 – FORWARD CURRENT DERATING CURVE

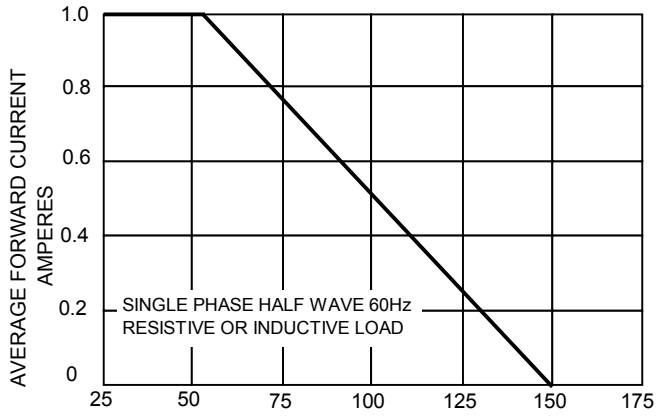


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

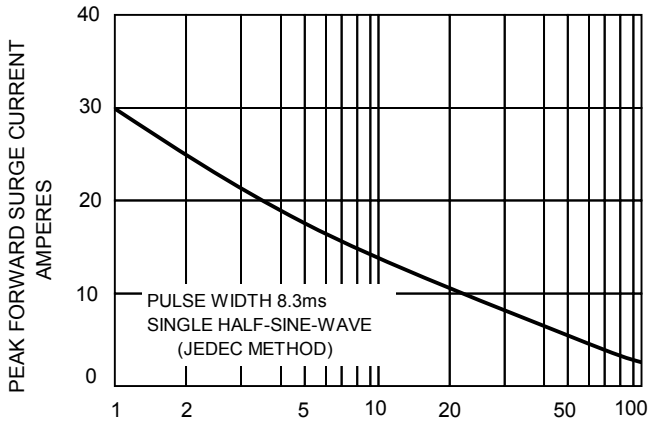


FIG.3 – TYPICAL JUNCTION CAPACITANCE

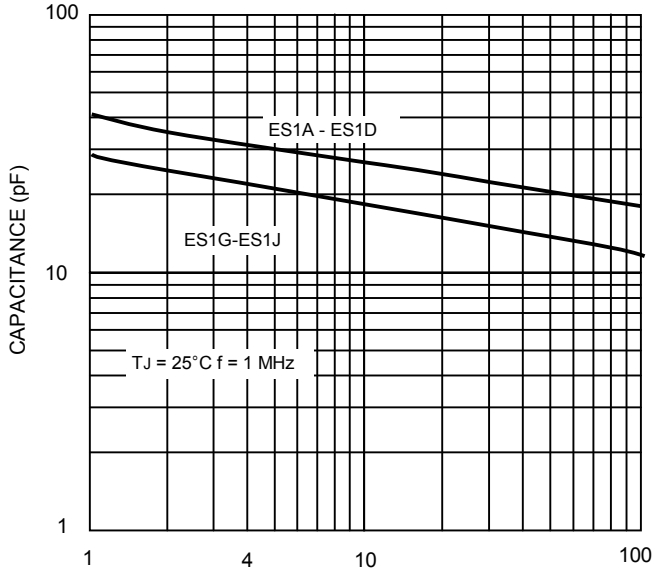


FIG.4-TYPICAL FORWARD CHARACTERISTICS

