

SUPER FAST SURFACE MOUNT RECTIFIERS

PRODUCT SUMMARY

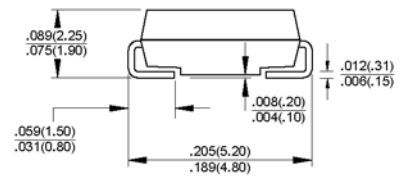
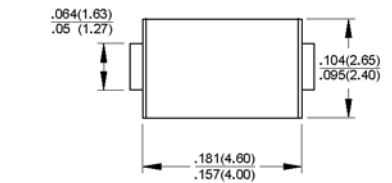
Reverse Voltage 50 to 1000 Volts
 Forward current 1.0 Ampere



FEATURES

- For surface mounted application
- Low profile package
- Built-in strain relief,
- Ideal for automated placement
- Easy pick and place
- Superfast recovery time for high efficiency
- Glass passivated chip junction
- High temperature soldering:
 250 °C /10 seconds at terminals
- Plastic material used carries Underwriters Laboratory
 Classification 94V-0

DO-214AC (SMA)



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Cases: Molded plastic
- Terminals: Solder plated
- Polarity: Indicated by cathode band
- 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 current by 20%

Parameter	Symbols	ES 1A	ES 1B	ES 1C	ES 1D	ES 1F	ES 1G	ES 1J	ES 1K	ES 1M	Units	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	800	1000	Volts	
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	560	700	Volts	
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	800	1000	Volts	
Maximum average forward rectified current See Fig. 1	$I_{(AV)}$	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 @ 1.0A	V_F	0.95			1.3			1.7			Volts	
Maximum DC reverse current @ $T_A=25^{\circ}C$ at rated DC blocking voltage @ $T_A=100^{\circ}C$	I_R					5.0		100				μA μA
Maximum reverse recovery time (Note 1)	t_{rr}						35					nS
Typical junction capacitance (Note 2)	C_J	10				8						pF
Typical thermal resistance (Note 3)	$R_{\theta JA}$ $R_{\theta JL}$					85		35				$^{\circ}C/W$
Operating junction temperature range	T_J						-55 to +150					$^{\circ}C$
Storage temperature range	T_{STG}						-55 to +150					$^{\circ}C$

- Notes:**
1. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$
 2. Measured at 1 MHz and Applied $V_R=4.0$ Volts
 3. P.C.B. Mounted on 0.2 x 0.2" (5.0 x 5.0mm) Copper Pad Area.

RATINGS AND CHARACTERISTIC CURVES

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

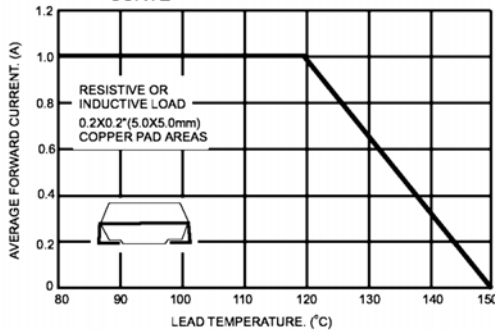


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

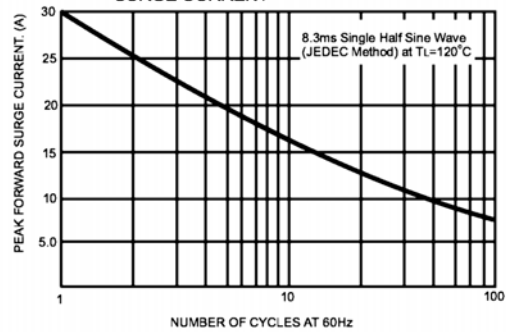


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

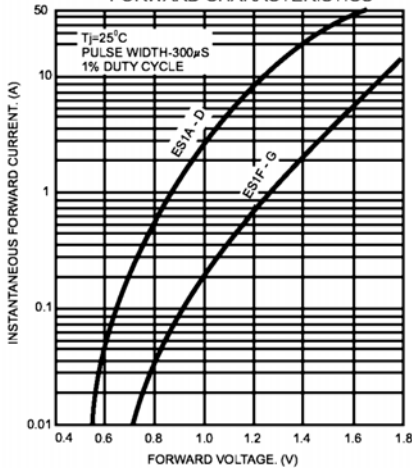


FIG.4- TYPICAL REVERSE CHARACTERISTICS

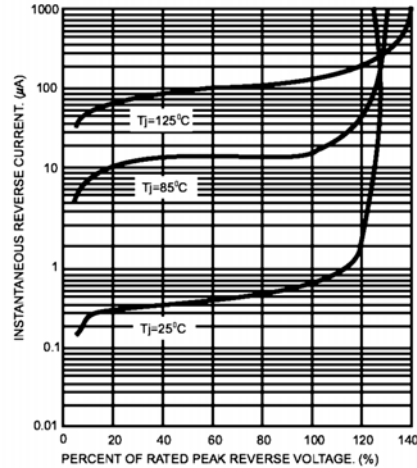
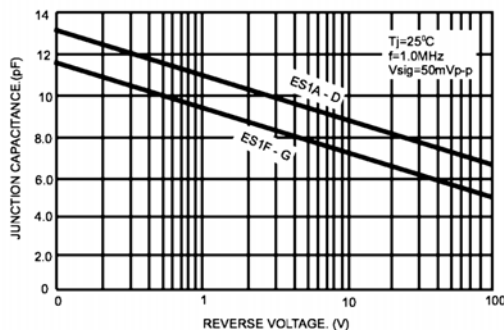


FIG.5- TYPICAL JUNCTION CAPACITANCE



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