

# SUPER FAST SURFACE MOUNT RECTIFIERS

## PRODUCT SUMMARY

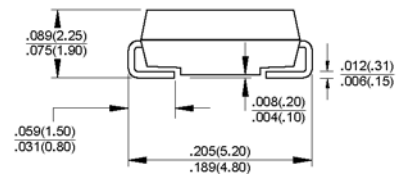
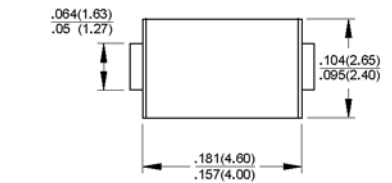
Reverse Voltage 50 to 1000 Volts  
 Forward current 1.0 Ampere



## 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					$\mu A$ $\mu A$	
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

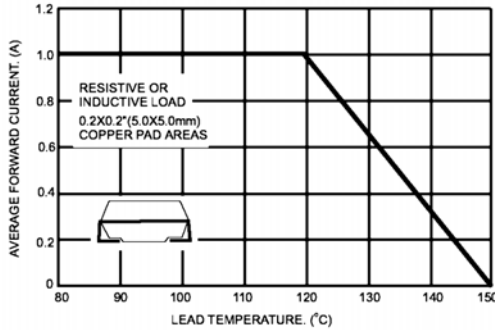


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

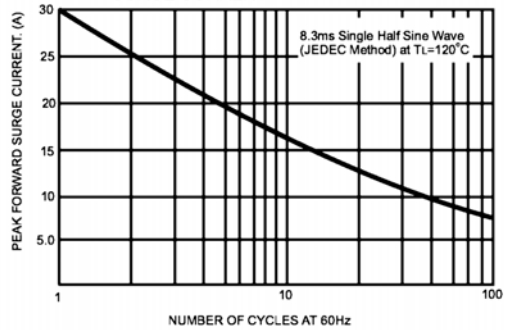


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

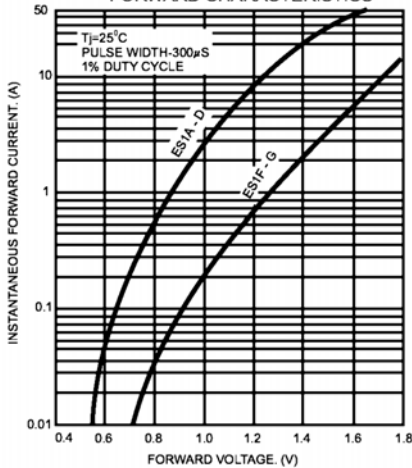


FIG.4- TYPICAL REVERSE CHARACTERISTICS

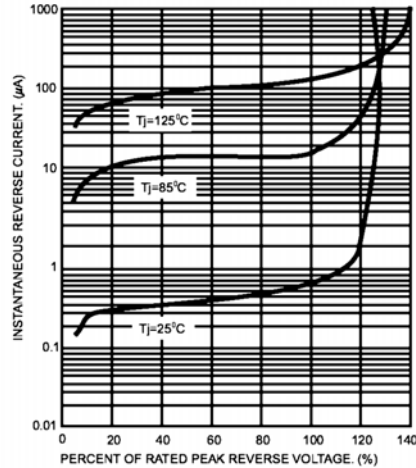
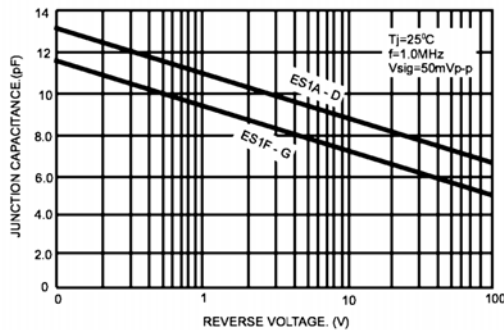


FIG.5- TYPICAL JUNCTION CAPACITANCE



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