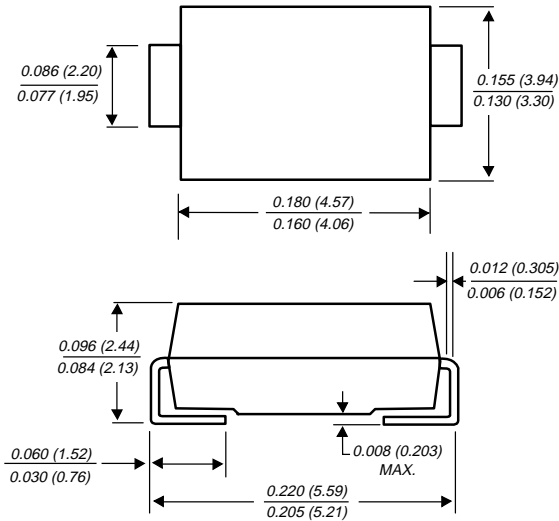


# ES2F AND ES2G

**SURFACE MOUNT FAST EFFICIENT PLASTIC RECTIFIER**  
**Reverse Voltage - 300 to 400 Volts      Forward Current - 2.0 Amperes**

## DO-214AA



Dimensions in inches and (millimeters)

## FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mount applications
- ◆ Low profile package
- ◆ Built-in strain relief
- ◆ Ideal for automated placement
- ◆ Easy pick and place
- ◆ Glass passivated chip junction
- ◆ Superfast recovery times for high efficiency
- ◆ Low power loss, high efficiency
- ◆ High temperature soldering: 250°C/10 seconds at terminals



## MECHANICAL DATA

**Case:** JEDEC DO-214AA molded plastic body over passivated chip

**Terminals:** Solder plated solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Weight:** 0.003 ounces, 0.093 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	ES2F	ES2G	UNITS
Device marking code		EF	EG	
Maximum repetitive peak reverse voltage	$V_{RRM}$	300	400	Volts
Working peak reverse voltage	$V_{RWM}$	225	300	Volts
Maximum RMS voltage	$V_{RMS}$	210	280	Volts
Maximum DC blocking voltage	$V_{DC}$	300	400	Volts
Maximum average forward rectified current at $T_L=110^\circ\text{C}$	$I_{(AV)}$	2.0		Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_L=110^\circ\text{C}$	$I_{FSM}$	50		Amps
Maximum instantaneous forward voltage at 2.0A	$V_F$	1.10		Volts
Maximum DC reverse current at working peak reverse voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	$I_R$	10 200		$\mu\text{A}$
Maximum reverse recovery time (NOTE 1)	$t_{rr}$	35		ns
Maximum reverse recovery time (NOTE 2)	$t_{rr}$	50		ns
Maximum reverse recovery current (NOTE 2)	$I_{RM}$	3.0		Amps
Maximum stored charge (NOTE 2)	$Q_{rr}$	50		nC
Typical junction capacitance (NOTE 3)	$C_J$	15		pF
Typical thermal resistance (NOTE 4)	$R_{\theta JA}$ $R_{\theta JL}$	75 25		$^\circ\text{C/W}$
Operating junction 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  $I_F=1.0\text{A}$ ,  $di/dt=100\text{A}/\mu\text{s}$ ,  $V_R=30\text{V}$ ,  $I_{rr}=0.1I_{RM}$

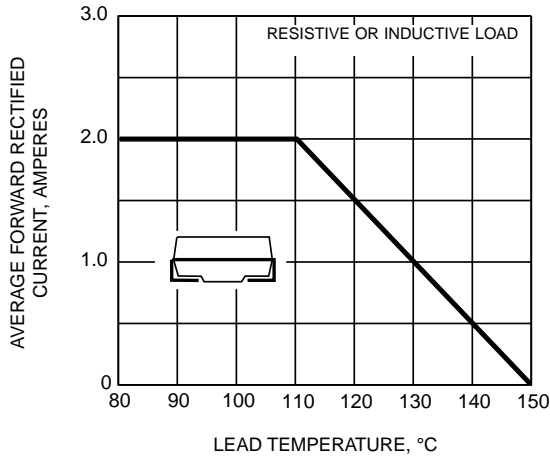
(3) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

(4) Units mounted on P.C.B. 5.0 x 5.0mm (0.013mm thick) land areas

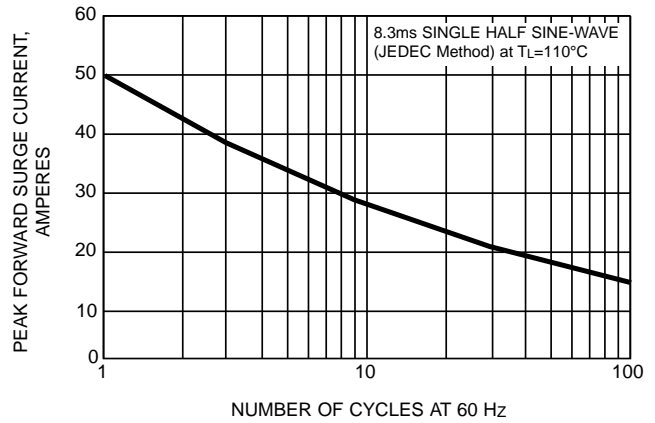
**NOTICE:** Advanced product information is subject to change without notice

# RATING AND CHARACTERISTIC CURVES ES2F AND ES2G

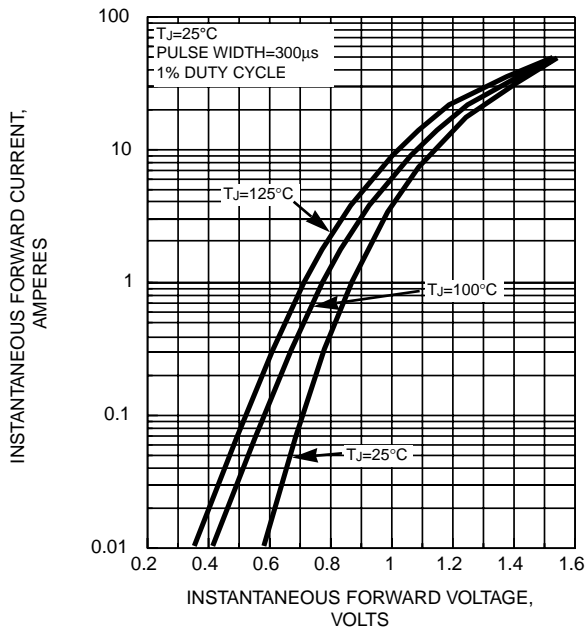
**FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE**



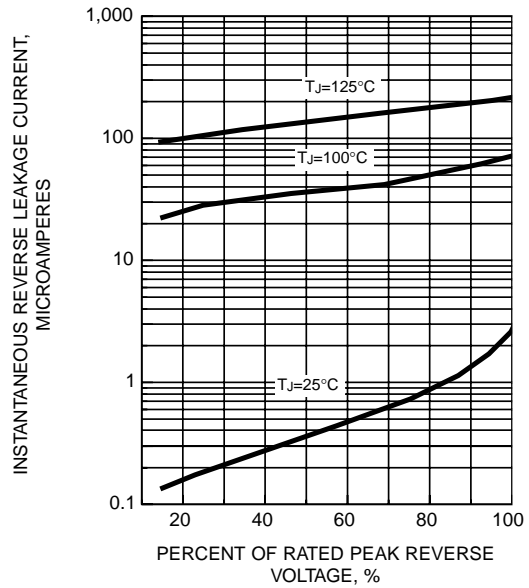
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



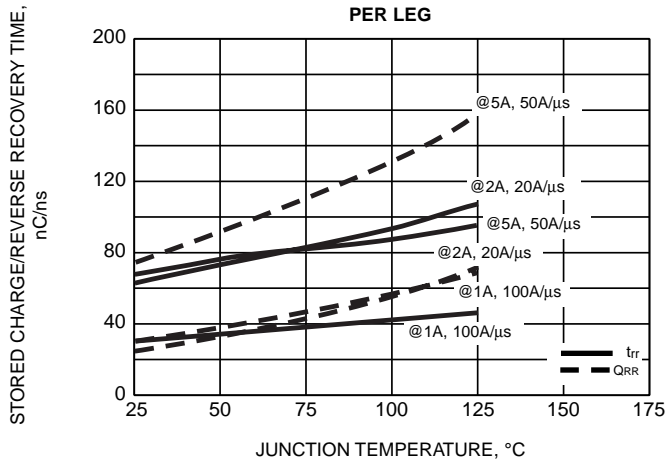
**FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG**



**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG**



**FIG. 5 - REVERSE SWITCHING CHARACTERISTICS PER LEG**



**FIG. 6 - TYPICAL JUNCTION CAPACITANCE PER LEG**

