

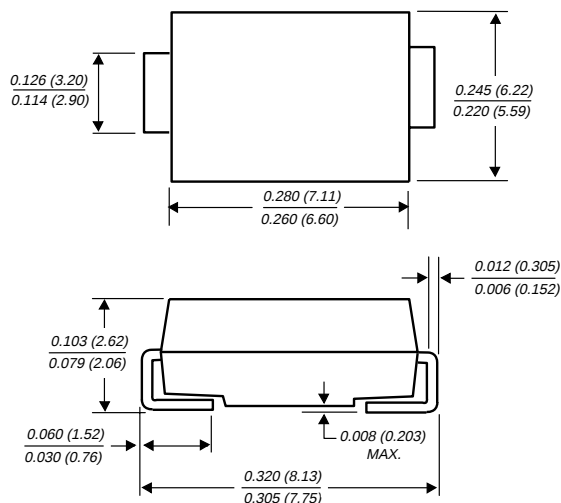
ES3F AND ES3G

SURFACE MOUNT ULTRAFAST EFFICIENT PLASTIC RECTIFIER

Reverse Voltage - 300 to 400 Volts

Forward Current - 3.0 Amperes

DO-214AB



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
- ◆ Superfast recovery time for high efficiency
- ◆ Glass passivated chip junction
- ◆ High temperature soldering: 250°C/10 seconds at terminals



MECHANICAL DATA

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

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

Polarity: Color band denotes cathode end

Weight: 0.007 ounces, 0.21 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	ES3F	ES3G	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 $T_L=100^\circ\text{C}$	$I_{(AV)}$	3.0		Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_L=100^\circ\text{C}$	I_{FSM}	100		Amps
Maximum instantaneous forward voltage at 3.0A	V_F	1.10		Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at working peak reverse voltage $T_A=100^\circ\text{C}$	I_R	10.0 350		μA
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		ns
Typical junction capacitance (NOTE 3)	C_J	30		pF
Typical thermal resistance (NOTE 4)	$R_{\theta JA}$ $R_{\theta JL}$	50 15		$^\circ\text{C/W}$
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. with 0.31 x 0.31" (8.0 x 8.0mm) copper pad areas

NOTICE: Advanced product information is subject to change without notice

RATING AND CHARACTERISTIC CURVES ES3F AND ES3G

FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE

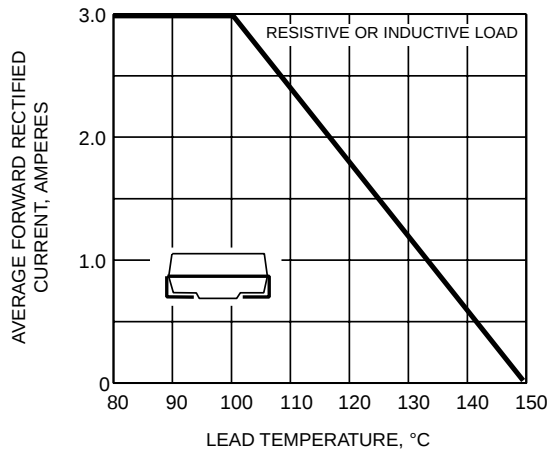


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

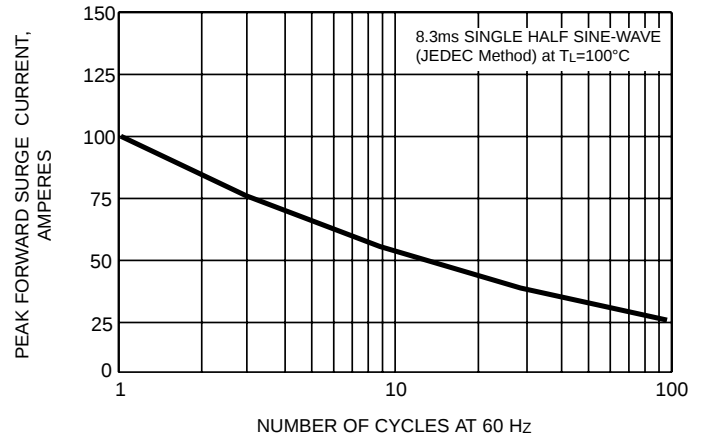


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

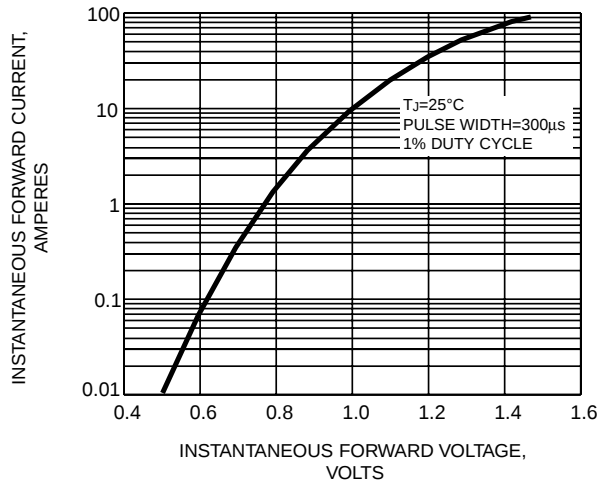


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

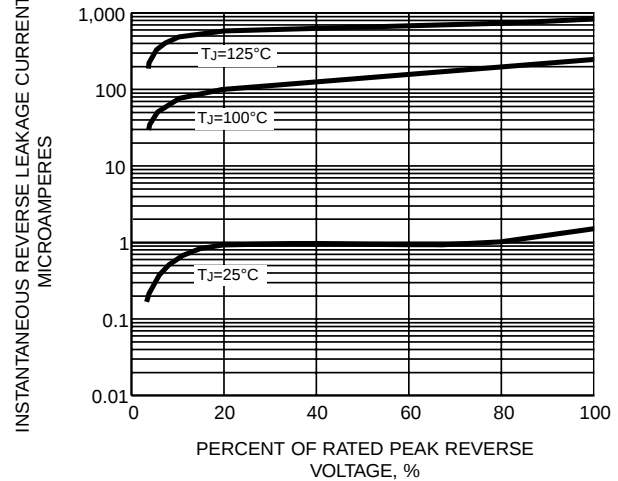


FIG. 5 - REVERSE SWITCHING CHARACTERISTICS

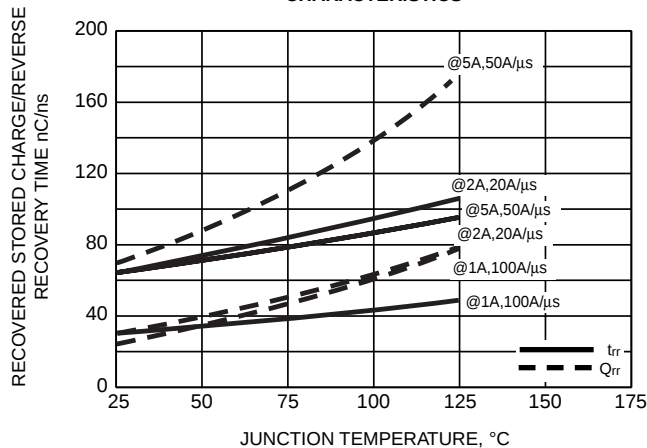


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

