

## ES3A-ES3J

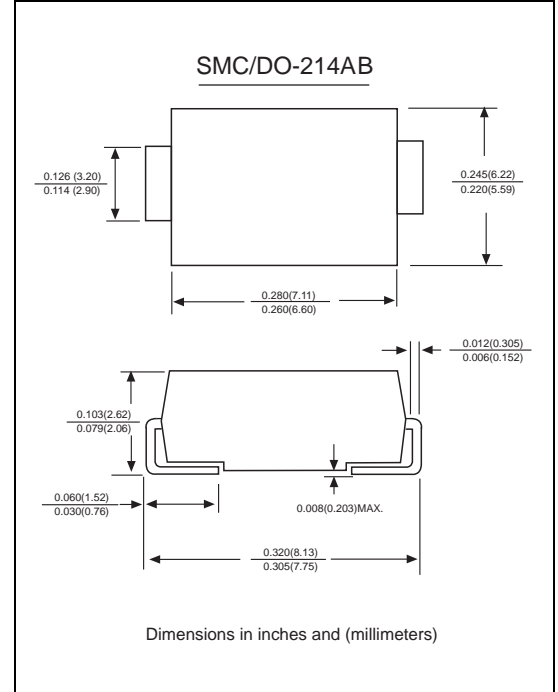
### 3.0Amp Surface Mount Super Fast Rectifiers

### Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Super fast speed switching for high efficiency
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed: 260°C/10 seconds at terminals.

### Mechanical Data

Case: JEDEC DO-214AB molded plastic body  
 Terminals: Solder plated, solderable per MIL-STD-750, Method 2026  
 Polarity: Color band denotes cathode end  
 Mounting Position: Any  
 Weight : 0.007 ounce, 0.25rams



### 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 current derate by 20%.

	SYMBOLS	ES3A	ES3B	ES3C	ES3D	ES3E	ES3G	ES3J	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	150	200	300	400	600	VOLTS
Maximum RMS voltage	$V_{RMS}$	35	70	105	140	210	280	420	VOLTS
Maximum DC blocking voltage	$V_{DC}$	50	100	150	200	300	400	600	VOLTS
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{(AV)}$	3.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	125							Amps
Maximum instantaneous forward voltage at 3.0A	$V_F$	0.95			1.25		1.7		Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	$I_R$	10.0 50.0							$\mu\text{A}$
Maximum reverse recovery time (NOTE 1)	$t_{rr}$	35							ns
Typical junction capacitance (NOTE 2)	$C_J$	100.0			50.0				pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	30.0							$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +150							$^\circ\text{C}$

- Note: 1.Reverse recovery condition  $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$   
 2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 3.P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

# Ratings And Characteristic Curves

## ES3A THRU ES3J

FIG. 1- FORWARD CURRENT DERATING CURVE

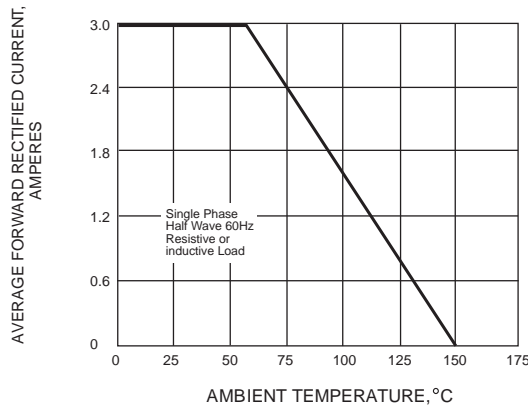


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

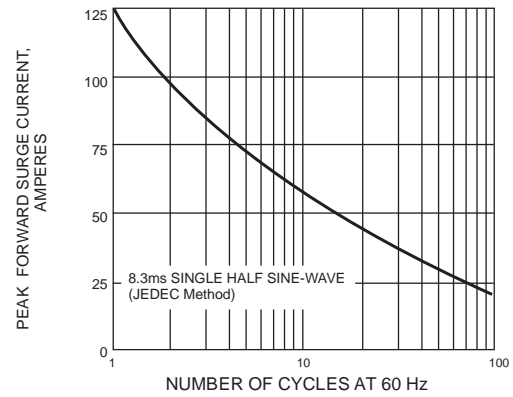


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

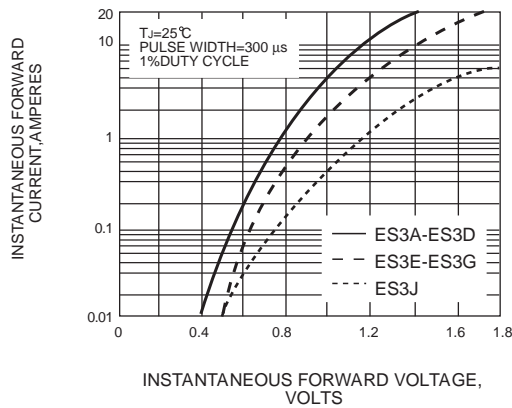


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

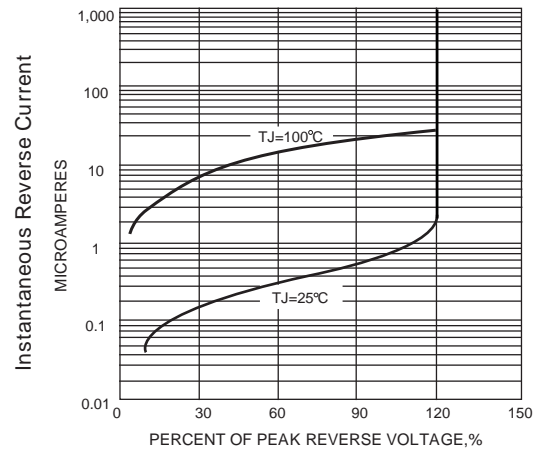


FIG. 5-TYPICAL JUNCTION CAPACITANCE

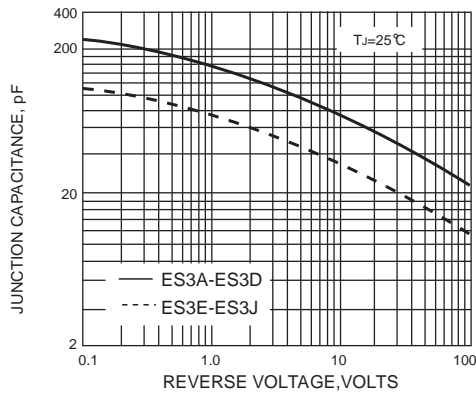


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

