



# ES3AH THRU ES3JH

## SURFACE MOUNT SUPERFAST RECOVERY RECTIFIERS

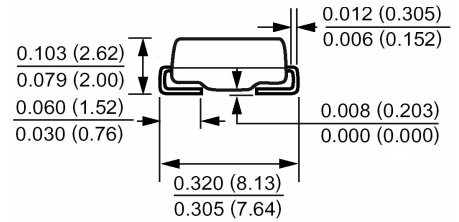
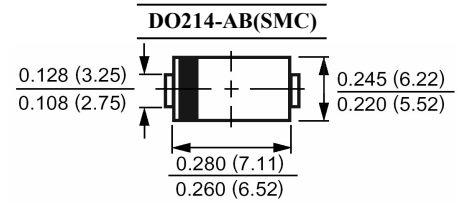
**REVERSE VOLTAGE:** 50 to 600 VOLTS  
**FORWARD CURRENT:** 3.0 AMPERE

### FEATURES

- Glass passivated die construction
- For surface mounted applications
- Super fast speed switching for high efficiency
- Low reverse leakage
- High forward surge current capability
- Suffix "H" indicates Halogen-free parts, ex. ES3AH.

### MECHANICAL DATA

Case : Molded plastic, DO-214AB(SMC)  
 Terminals : Solder plated, solderable per MIL-STD-750,  
 method 2026 guaranteed  
 Polarity : Color band denotes cathode end



Dimensions in inch and (millimeter)

### 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	ES3AH	ES3BH	ES3CH	ES3DH	ES3EH	ES3GH	ES3JH	Units
Maximum Recurrent 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	
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	600	
Maximum Average Forward Rectified Current at $T_L=75^\circ\text{C}$	$I_{(AV)}$	3.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	100							Amp
Maximum Forward Voltage at 3.0A	$V_F$	0.95				1.30		1.70	Volts
Maximum Reverse Current at $T_j=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_j=125^\circ\text{C}$	$I_R$					5.0			$\mu\text{Amp}$
						100			
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$					50			$^\circ\text{C/W}$
Maximum Reverse Recovery Time (Note 2)	$t_{rr}$					35			ns
Operating Junction Temperature Range	$T_j$					-65 to +150			$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$					-65 to +150			

#### NOTES:

- 1- Thermal resistance from junction to ambient mounted on P.C.B. with 0.6" x 0.6" (16 mm x 16 mm) copper pad areas
- 2- Reverse Recovery Test Conditions:  $I_F=5A$ ,  $I_R=1A$ ,  $I_{RR}=25A$ .



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### RATINGS AND CHARACTERISTIC CURVES

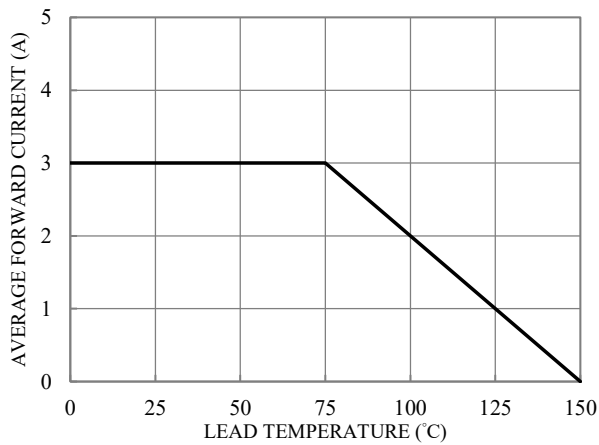


Fig.1 Forward Current Derating Curve

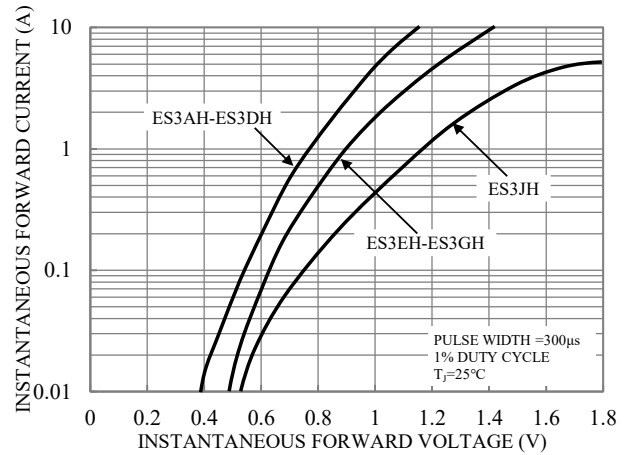


Fig. 2 Typical Forward Characteristics

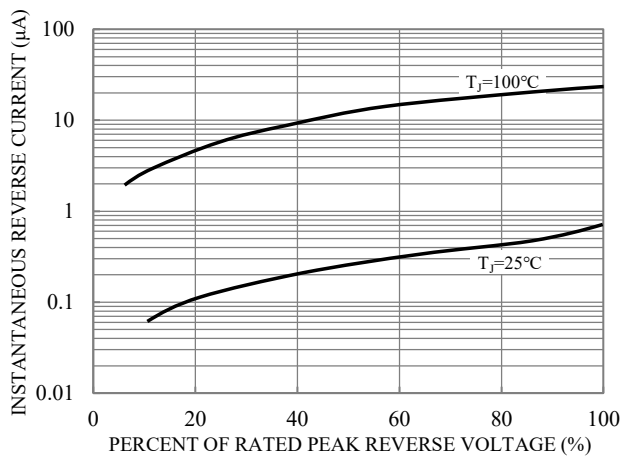


Fig.3 Typical Reverse Characteristics

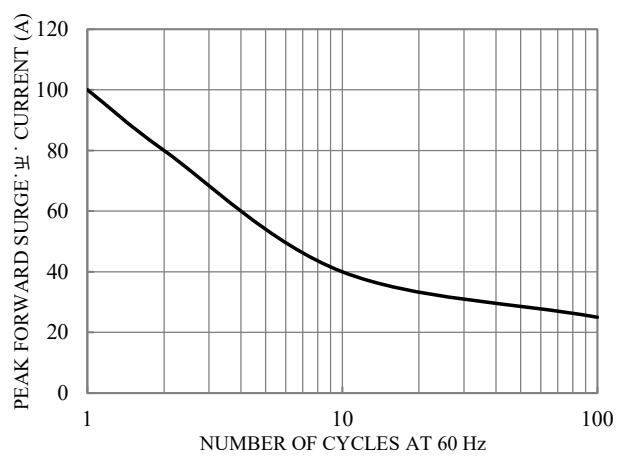


Fig. 4 Maximum Non-repetitive Forward Surge Current