



ES1AFLH THRU ES1JFLH

SURFACE MOUNT SUPERFAST RECOVERY RECTIFIER

REVERSE VOLTAGE: 50 to 600 VOLTS
FORWARD CURRENT: 1.0 AMPERE

FEATURES

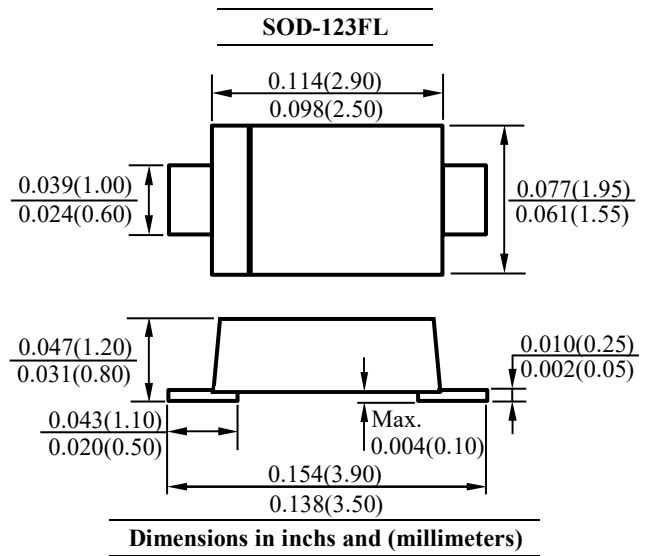
- Superfast Recovery Times For High Efficiency
- Glass Passivated Die Construction
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- Suffix "H" indicates Halogen-free parts, ex. ES1AFLH

MECHANICAL DATA

Case : Molded plastic, SOD-123FL

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

Polarity : Color band denotes cathode end



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	ES1AFLH	ES1BFLH	ES1CFLH	ES1DFLH	ES1EFLH	ES1GFLH	ES1JFLH	Units	
		EIA	EIB	EIC	EID	EIE	EIG	EIJ		
Marking Code										
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	Volts	
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	600	Volts	
Maximum Average Forward Rectified Current at T _L =100°C	I _(AV)	1.0							Amp	
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	25							Amp	
Maximum Forward Voltage at 1.0A	V _F	0.95			1.25		1.70		Volts	
Maximum Reverse Current at T _J =25°C at Rated DC Blocking Voltage T _J =125°C	I _R	5.0				100				µAmp
Typical Thermal Resistance (Note 1)	R _{θJL}	35								°C/W
Maximum Reverse Recovery Time (Note 2)	t _{rr}	35								ns
Operating Junction Temperature Range	T _J	-55 to +150							°C	
Storage Temperature Range	T _{stg}	-55 to +150							°C	

NOTES:

1- Thermal resistance from junction to lead mounted on P.C.B. with 0.3 x 0.3" (8.0 x 8.0mm) copper pad areas

2- Reverse Recovery Test Conditions: I_r=0.5A, I_R=1A, I_{rr}=0.25A.



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RATINGS AND CHARACTERISTIC CURVES

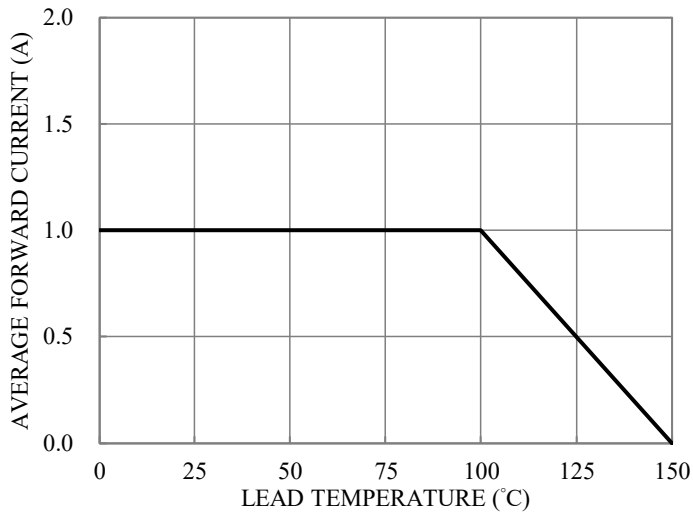


Fig.1-FORWARD CURRENT DERATING CURVE

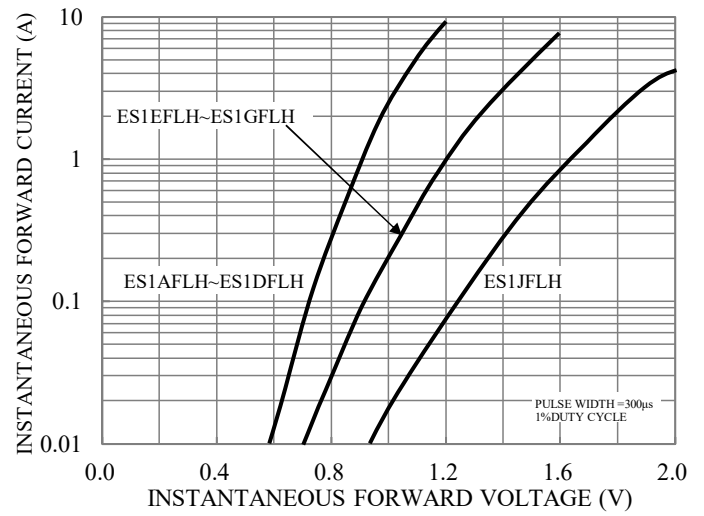


Fig.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

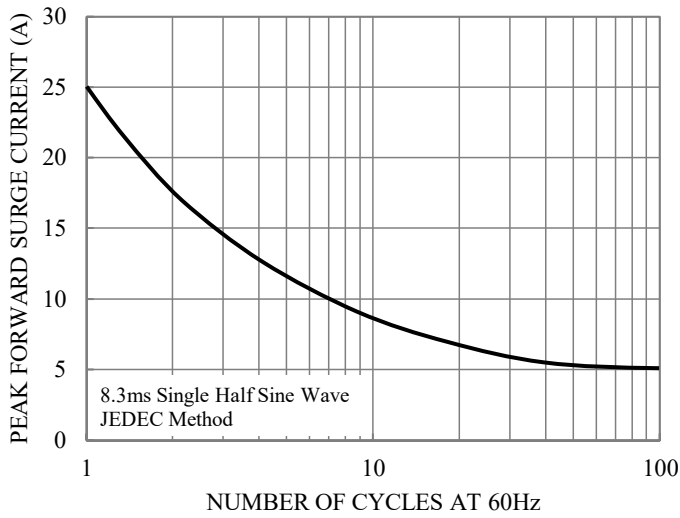


Fig.3-MAXIMUM NON-REPETITIVE SURGE CURRENT

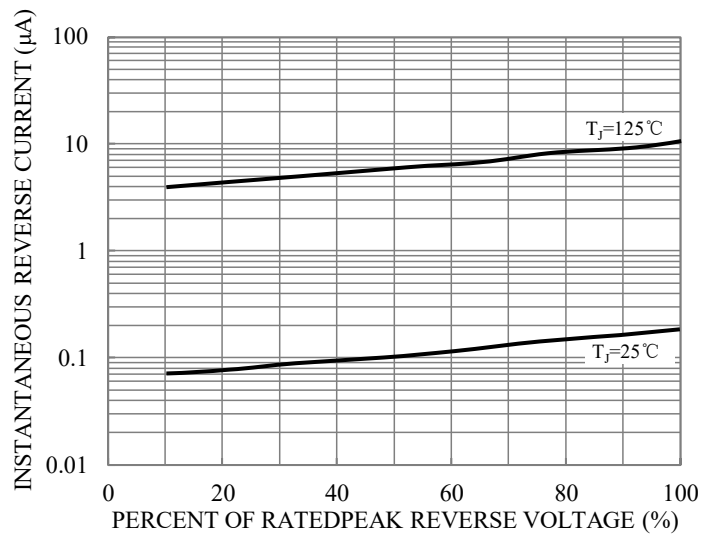


Fig.4-TYPICAL REVERSE CHARACTERISTICS