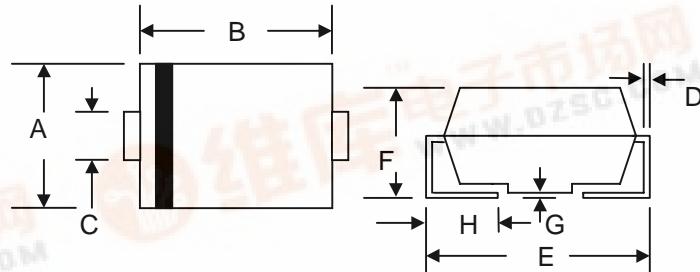



**EFS1J**

1.0A LOW VF SURFACE MOUNT GLASS PASSIVATED SUPERFAST DIODE

## Features

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop, High Efficiency
- Surge Overload Rating to 30A Peak
- Low Power Loss
- Super-Fast Recovery Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O



## Mechanical Data

- Case: SMA/DO-214AC, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.064 grams (approx.)
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 4**

SMA/DO-214AC		
Dim	Min	Max
A	2.50	2.90
B	4.00	4.60
C	1.20	1.60
D	0.152	0.305
E	4.80	5.28
F	2.00	2.44
G	0.051	0.203
H	0.76	1.52

All Dimensions in mm

## Maximum Ratings and Electrical Characteristics $\text{@T}_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	EFS1J	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>		
Working Peak Reverse Voltage	V <sub>RWM</sub>	600	V
DC Blocking Voltage	V <sub>R</sub>		
RMS Reverse Voltage	V <sub>R</sub> (RMS)	420	V
Average Rectified Output Current $\text{@T}_L = 75^\circ\text{C}$	I <sub>O</sub>	1.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	30	A
Forward Voltage $\text{@I}_F = 1.0\text{A}$	V <sub>FM</sub>	1.25	V
Peak Reverse Current $\text{@T}_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage $\text{@T}_A = 100^\circ\text{C}$	I <sub>RM</sub>	5.0 100	$\mu\text{A}$
Reverse Recovery Time (Note 1)	t <sub>rr</sub>	50	nS
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	8	pF
Typical Thermal Resistance (Note 3)	R <sub>θ</sub> JL	35	°C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150	°C

Note: 1. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>rr</sub> = 0.25A. See figure 5.  
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.  
 3. Mounted on P.C. Board with 8.0mm<sup>2</sup> land area.

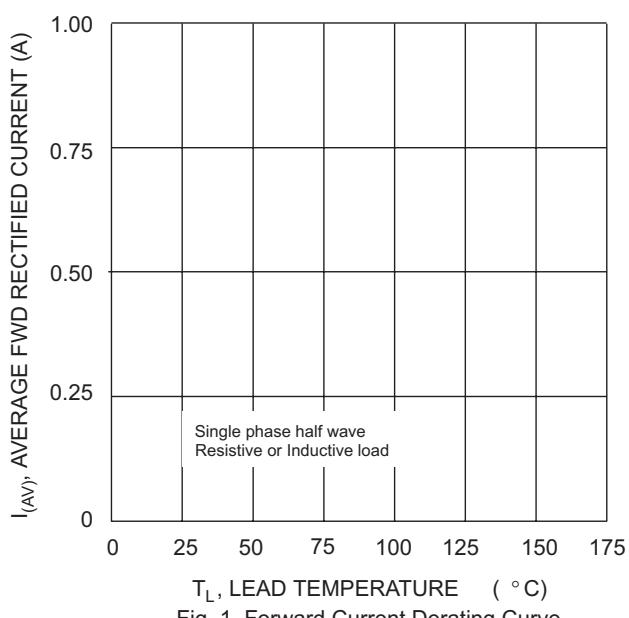


Fig. 1 Forward Current Derating Curve

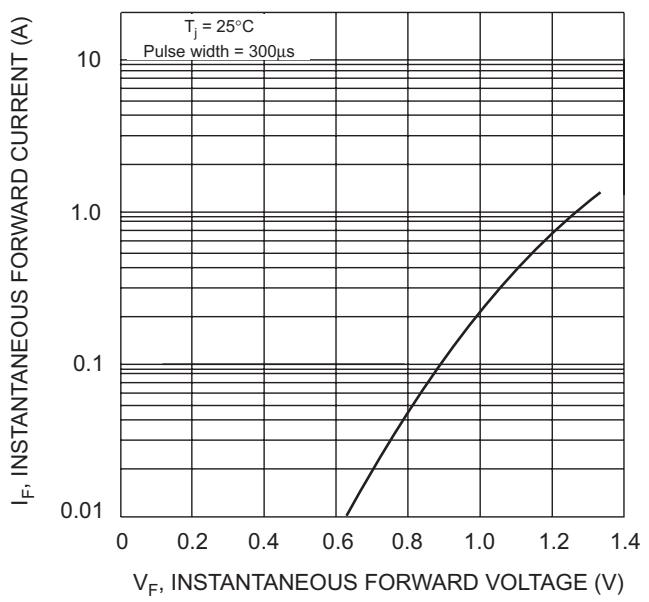


Fig. 2 Typical Forward Characteristics

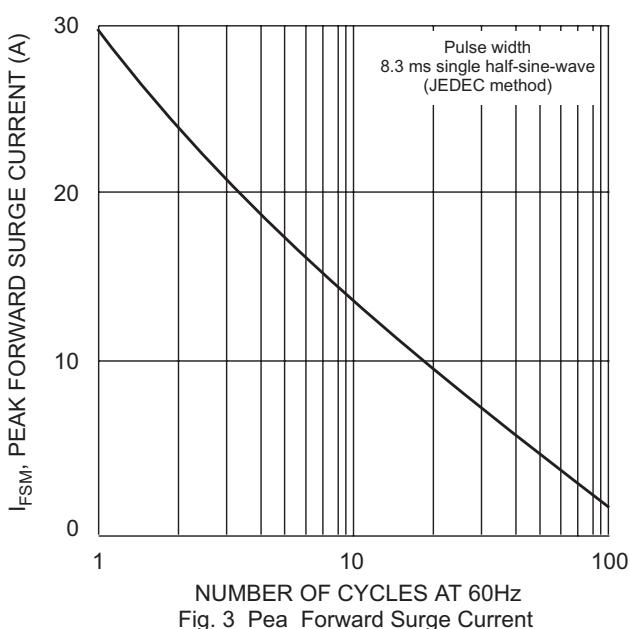


Fig. 3 Peak Forward Surge Current

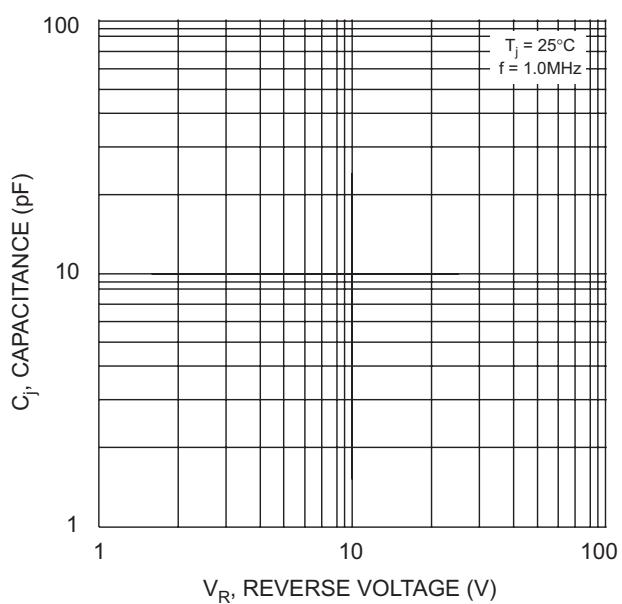
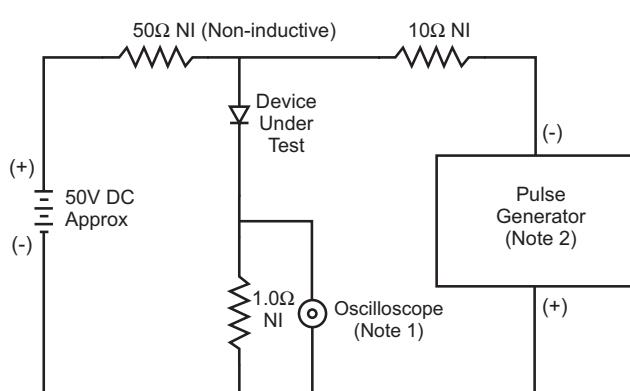


Fig. 4 Typical Junction Capacitance



Notes:

1. Rise Time = 7.0ns max. Input Impedance =  $1.0\text{M}\Omega$ , 22pF.
2. Rise Time = 10ns max. Input Impedance = 50Ω.

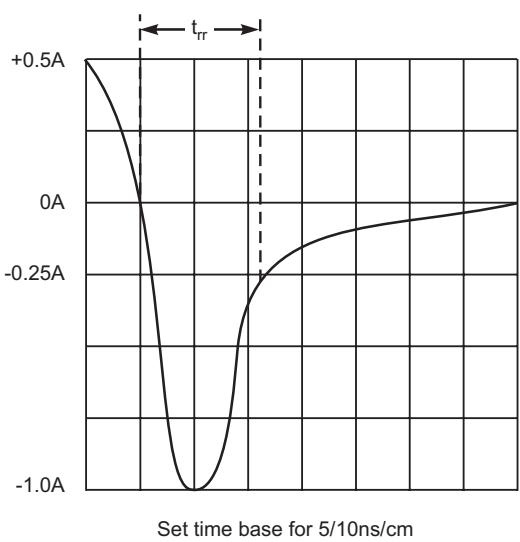
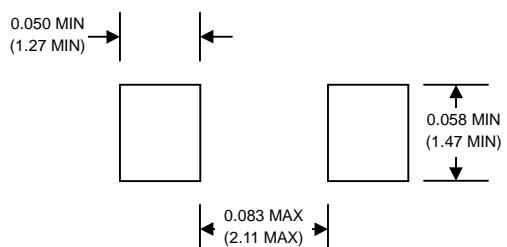
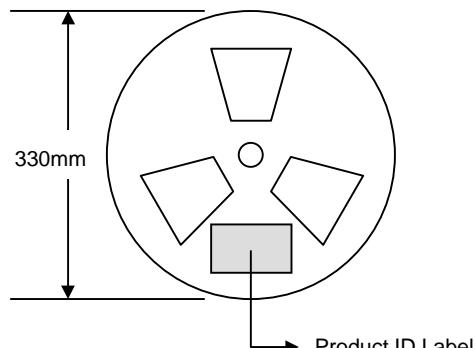
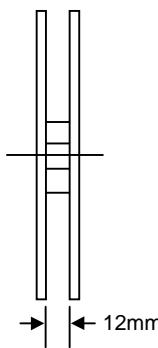
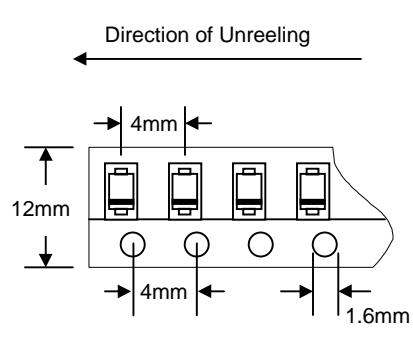


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

## MARKING INFORMATION

MARKING INFORMATION	RECOMMENDED FOOTPRINT
 <p>Cathode = Polarity Band WTE = Manufacturer's Logo EFS1J = Device Number</p>	 <p>0.050 MIN (1.27 MIN) 0.058 MIN (1.47 MIN) 0.083 MAX (2.11 MAX)</p> <p>inches(mm)</p>

## PACKAGING INFORMATION

TAPE & REEL														
 														
 <table border="1"><thead><tr><th>Reel Diameter (mm)</th><th>Quantity (PCS)</th><th>Inner Box Size L x W x H (mm)</th><th>Quantity (PCS)</th><th>Carton Size L x W x H (mm)</th><th>Quantity (PCS)</th><th>Approx. Gross Weight (KG)</th></tr></thead><tbody><tr><td>330</td><td>7,500</td><td>340 x 337 x 45</td><td>15,000</td><td>370 x 370 x 420</td><td>120,000</td><td>17.5</td></tr></tbody></table> <p><b>Note:</b> 1. Paper reel, white or gray color. 2. Components are packed in accordance with EIA standard 481-1 and 481-2.</p>	Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)	330	7,500	340 x 337 x 45	15,000	370 x 370 x 420	120,000	17.5
Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)								
330	7,500	340 x 337 x 45	15,000	370 x 370 x 420	120,000	17.5								

## ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
EFS1J-T3	SMA	7500/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. To order RoHS / Lead Free version (with Lead Free finish), add “-LF” suffix to part number above. For example, EFS1J-T3-LF.

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