



A Product Line of **Diodes Incorporated** 

#### LITE-ON SEMICONDUCTOR

# FES1JE

#### SURFACE MOUNT **REVERSE VOLTAGE** - 600 Volts SUPER FAST RECTIFIERS FORWARD CURRENT - 1.0 Amperes **FEATURES** F1A Fast switching for high efficiency For surface mounted applications F1A · Glass passivated chip DIM MIN TYP MAX • Low reverse leakage current L. Low forward voltage drop Α 3.50 3.80 3.90 High current capability в 1.70 1.90 2.00 Qualified according to AEC-Q101 Rev\_C С 0.81 1.18 1.20 • Lead-Free Finish; RoHS Compliant (Notes 1 & 2) D 2.70 2.80 2.90 Halogen and Antimony Free. "Green" Device (Note 3) 1.35 Е 0.80 1.00 F 0.05 0.15 0.30 **MECHANICAL DATA** 0.35 0.60 0.85 G Case: JEDEC DO-219AA 0.10 н 0.03 0.07 · Case Material: "Green" molding compound, UL L **0**° 5° 8° flammability classification 94V-0,"Halogen-free". • Terminals: Lead Free Plating (Matte Tin Finish.) All dimension in millimeter Component in accordance to RoHs 2002/95/EC

- Marking code: E1J
- Weight: 16.5mg (Approximate)

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

#### ABSOLUTE RATING

PARAMETER		SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage		V <sub>RRM</sub>	600	V
Maximum DC blocking voltage		V <sub>DC</sub>	600	V
Average rectified forward current	@Tc=75°C	I <sub>(AV)</sub>	1.0	А
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load		I <sub>FSM</sub>	30	A
Operating and Storage temperature range		TJ, TSTG	-55 ~ +150	°C

#### STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST (	CONDITION	SYMBOL	ТҮР	MAX	UNIT
Forward voltage	I <sub>F</sub> =1.0A	T <sub>J</sub> =25°C	VF	1.09	1.3	V
Leakage current	V <sub>R</sub> =600V	T <sub>J</sub> =25°C T <sub>J</sub> =125°C	I <sub>R</sub>	0.1 3	5 200	uA
Typical junction capacitance (Note 4)			CT	20		pF

#### THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	ТҮР	UNIT
	R <sub>thJA</sub>	105	
Typical Thermal Resistance (Note 5)	RthJL	45	°C/W
	R <sub>thJC</sub>	55	

#### DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MAX		UNIT
Reverse recovery time	I <sub>F</sub> =0.5A ,I <sub>RR</sub> =0.25A,I <sub>R</sub> =1.0A	t <sub>rr</sub>	35		nS
Note:				REV4. Oct2021, KS	SEP08

1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.

2. See https://www.diodes.com/quality/lead-free/ for more information about Diodes Incorporated's definitions of Halogen- and

Antimony-free, "Green" and Lead-free.

3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

4. Measured at 1.0MHz and applied reverse voltage of 4.0V DC

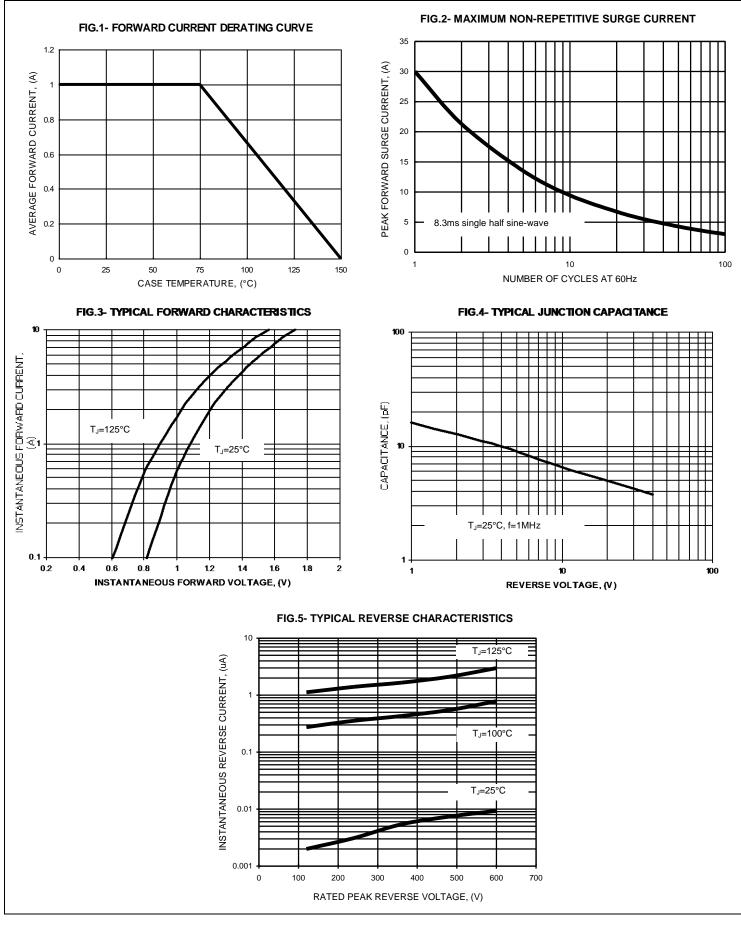
5. Thermal resistance test performed in accordance with JESD-51.





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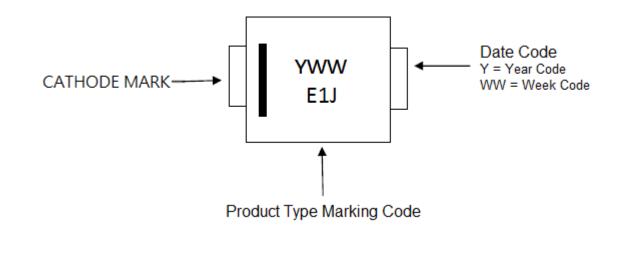


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## **Ordering Information :**

Part Number	Paakaga	Packing		
	Package	Qty.	Carrier	
FES1JE-7	F1A	2500	Tape & Reel	
FES1JE	F1A	10000	Tape & Reel	

Marking Information :





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