TENTATIVE DATA SHEET



FES1BW TG.....FES1JW TG

1.0 Amp. Surface Mount Top Glass Passivated Ultrafast Recovery Rectifier

SOD123W



Voltage 100 to 600 V

Current 1.0 A

> UTOMOTIVE GRADE

FEATURES

- Top-Glass Technology
- Low profile package
- Ideal for automated placement
- Low power losses, high efficiency
- High surge current capability
- Cavity-free glass-passivated junction
- Low forward voltage drop
- Solder dip 260°C, 10s
- AEC-Q101 qualified
- Component in accordance to RoHS 2011/65/EU and WEEE 2002/96/EC
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260° C

MECHANICAL DATA

- Case: SOD123W. Epoxy meets UL 94V-0 flammability rating.
- Polarity: Color band denotes cathode end.
- Terminals: Matte tin plated leads, solderable per MIL-STD-750 Method 2026, J-STD-002 and JESD22-B102. Consumer grade, meets JESD 201 class 1A whisker test. HE3 suffix for high reliability grade, meets JESD 201 class 2 whisker test.



Used in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer, automotive and telecommunication.

Maximun Ratings and Electrical Characteristics at 25°C

		FES1BW TG	FES1DW TG	FES1GW TG	FES1JW TG
	Marking Code	2K	2L	2M	2N
V _{RRM}	Maximum Recurrent Peak Reverse Voltage (V)	100	200	400	600
V _{RMS}	RMS Maximum RMS Voltage (V)		140	280	420
V_{DC}	Maximum DC Blocking Voltage (V)	100	200	400	600
I _{F(AV)}	Forward current at T _C = 120 °C	1.0 A			
I _{FSM}	8.3 ms. peak forward surge current (Jedec Method)	30 A			
V _F	Maximum Instantaneous Forward	0.95 V		1.0\/	1 7 \ /
	Voltage at 1.0A			1.3 V	1.7 V
I _R	Maximum DC Reverse Current Tj = 25 °C	5 μΑ			
	at Rated DC Blocking Voltage Tj = 100 °C	100 μΑ			
T _{rr}	Maximum Reverse Recovery Time (0.5/1/0.25A)	35 ns			
C _j	Typical Junction Capacitance (1MHz; -4V)	10 pF 8 pF		ρF	
R _{th (j-c)}	Typical Thermal Resistance	27 °C/W			
R _{th (j-a)}	(5x5 mm ² x 130 μ Copper Area)	75 °C/W			
T _j _ T _{stg}	Operating Junction and Storage	-55 to + 150 °C			
	Temperature Range				

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Version: Mar-13 Page Number: 1/4

TENTATIVE DATA SHEET



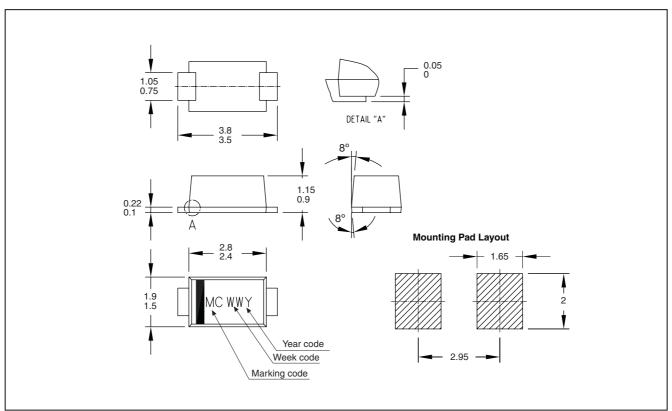
FES1BW TG.....FES1JW TG

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Ordering information

PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
FES1DW TRTB	TRTB	13" diameter tape and reel	10,000	0.0196
FES1DW HE3 TRTB	TRTB	13" diameter tape and reel	10,000	0.0196

Package Outline Dimensions: (mm) SOD123W



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Document Name: fes1w

Version: Mar-13

Page Number: 2/4

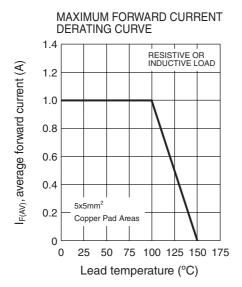




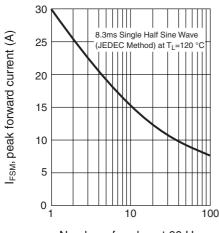
FES1BW TG.....FES1JW TG

1.0 Amp. Surface Mount Top Glass Passivated Ultrafast Recovery Rectifier

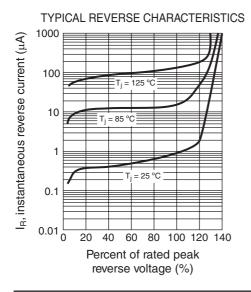
Ratings and Characteristics (Ta 25 °C unless otherwise noted)



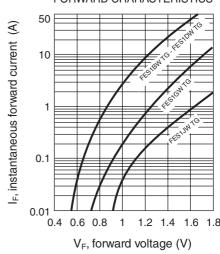
MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



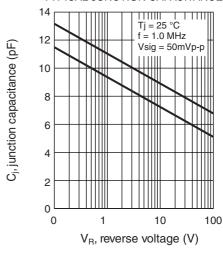
Number of cycles at 60 Hz



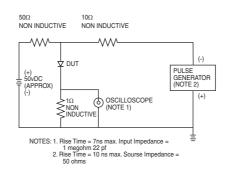
TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

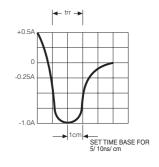


TYPICAL JUNCTION CAPACITANCE



REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM





www.fagorelectronica.com Document Name: fes1w Version: Mar-13 Page Number: 3/4

TENTATIVE DATA SHEET



FES1BW TG.....FES1JW TG

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www.fagorelectronica.com Version: Mar-13
Document Name: fes1w Page Number: 4/4