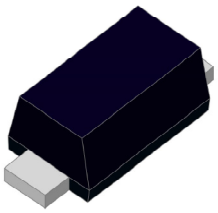
FAGOR

FSS26BW

2.0 Amp. Surface Mount High Temperature Schottky Barrier Rectifier

SOD123W



Voltage	Current
60 V	2.0 A

FEATURE

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- Low forward voltage drop
- High forward surge current capability
- Solder dip 260 ºC, 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 ºC
- Very low leakage current

AUTOMOTIVE GRADE Available

Pb

e3

RoHS COMPLIANT

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.

TYPICAL APPLICATIONS

Used in low voltage high frecuency inverters, freewheeling, dc-to-dc converters, and polarity protection applications.

Maximun Ratings and Electrical Characteristics at 25 °C

		FSS26BW
Marking Code		**3P**
V_{RRM}	Maximum Recurrent Peak Reverse Voltage (V)	60
V_{RMS}	Maximum RMS Voltage (V)	42
V_{DC}	Maximum DC Blocking Voltage (V)	60
$I_{F(VA)}$	Forward Current at T_L (See graphic)	2.0 A
I_{FSM}	8,3 ms. Peak Forward Surge Current (Jedec Method)	80 A
V_F	Maximum Instantaneous Forward Voltaje @ I_F = 2 A (Note 1)	0.70 V
I_R	Maximum DC Reverse Current at Rated DC Blocking Voltage (Note 2)	1 µA
T_{RR}	Reverse Recovery Time (I_F = 0.5A, I_R = 0.5A, I_R (meas) = 0.1A)	<10 ns
V_{FRM}	Peak Forward Recovery Voltage (I_F = 0.5A, dI_F / dI_t = 20A/µs	0.58 V
T_j	Operating Temperature Range	- 55 to + 175 ºC
T_{stg}	Store Temperature Range	- 65 to + 175 ºC
Cj	Typical Junction Capacitance (4.0V, 1 MHz)	120 pF
$R_{th\ (j-a)}$	Maximum Thermal Resistance (Note 3)	220 ºC/W
	Junction to Ambient (Note 4)	130 ºC/W
$R_{th\ (j-l)}$	Maximum Thermal Resistance Junction to Lead	15 ºC/W

Notes:
1. Pulse Test: 300µ Pulse Width, 1% Duty Cycle
2. Pulse test: Pulse Width ≤ 40ms
3. Device mounted on an FR4 PCB, standard footprint
4. Device mounted on an FR4 PCB, mounting pad for cathode 1cm²

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Static Electrical Characteristics

Symbol	Parameter	Test Conditions	Typ.	Max.	Unit
V_F	Max. Instantaneous Forward Voltage	T_j = -40 ºC I_F = 2.0 A	0.70	0.74	V
		T_j = 25 ºC I_F = 2.0 A	0.61	0.65	
		T_j = 175 ºC I_F = 2.0 A	0.46	0.5	
I_R	Max. DC Reverse Leakage Current	T_j = 25 ºC V_R = V_{RR}	0.6	1	µA
		T_j = 125 ºC V_R = V_{RR}	0.6	0.8	mA
		T_j = 150 ºC V_R = V_{RR}	2.8	3.5	
		T_j = 175 ºC V_R = V_{RR}	9	11	

	IRmax (µA)*					
	VR	VR	VR	VR	VR	VR
TEMP.	5V	10V	20V	30V	40V	60V
-40 ºC	0,10	0,11	0,13	0,14	0,15	0,30
-10 ºC	0,20	0,21	0,23	0,24	0,25	0,50
25 ºC	0,30	0,35	0,40	0,45	0,50	1
85 ºC	9	12	15	18	20	70
125 ºC	125	150	250	280	300	800
150 ºC	500	600	800	900	1000	3500
175 ºC	2500	3000	4000	5000	6500	11000

	VFmax (V)*					
	IF	IF	IF	IF	IF	IF
TEMP.	0,1A	0,5A	0,7A	1A	1,6A	2A
-40 ºC	0,53	0,59	0,60	0,65	0,72	0,74
-10 ºC	0,49	0,55	0,57	0,61	0,68	0,70
25 ºC	0,44	0,51	0,53	0,56	0,63	0,65
85 ºC	0,36	0,45	0,48	0,51	0,55	0,57
125 ºC	0,31	0,42	0,45	0,48	0,50	0,52
150 ºC	0,28	0,40	0,44	0,46	0,49	0,51
175 ºC	0,25	0,38	0,42	0,45	0,48	0,50

* measured under pulsed conditions (short duration pulse test used to minimize self-heating effect; thermal runaway)

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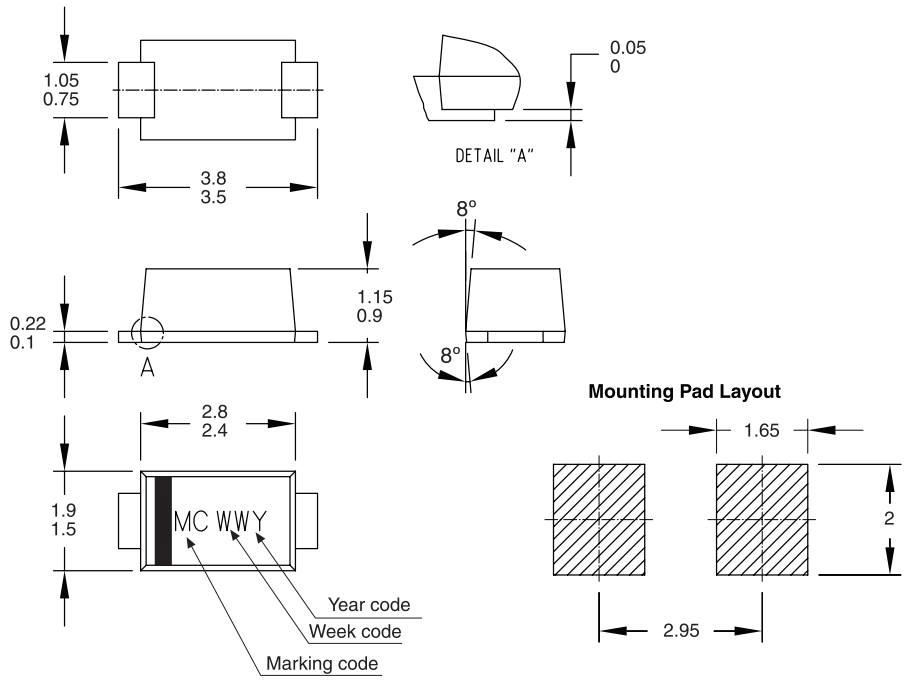
Ordering information

PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
FSS26BW HE3 TRTB	TRTB	13" diameter tape and reel	10,000	0.0165

Package Outline Dimensions: (mm) SOD123W



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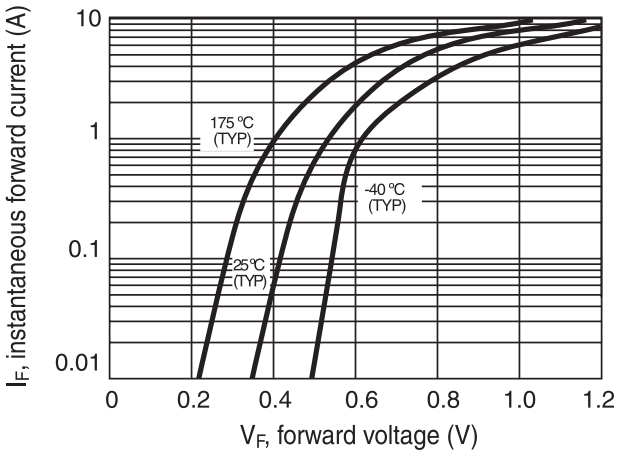
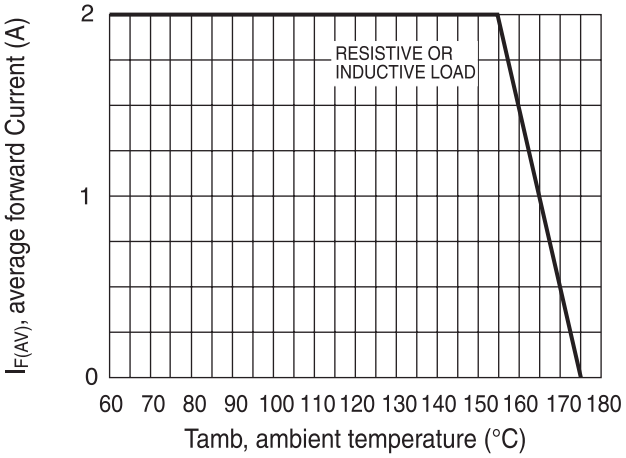
Rating and Characteristics (Ta 25 ºC unless otherwise noted)

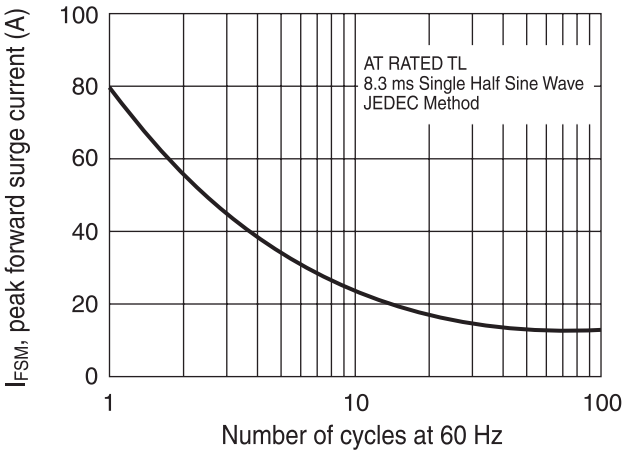
TYPICAL FORWARD CHARACTERISTIC



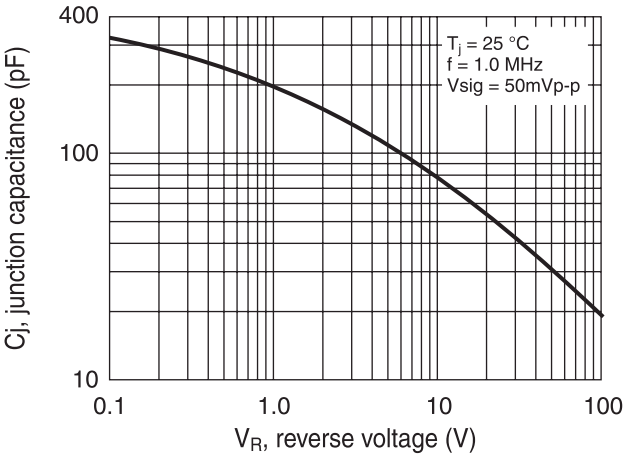
MAXIMUM FORWARD CURRENT DERATING CURVE



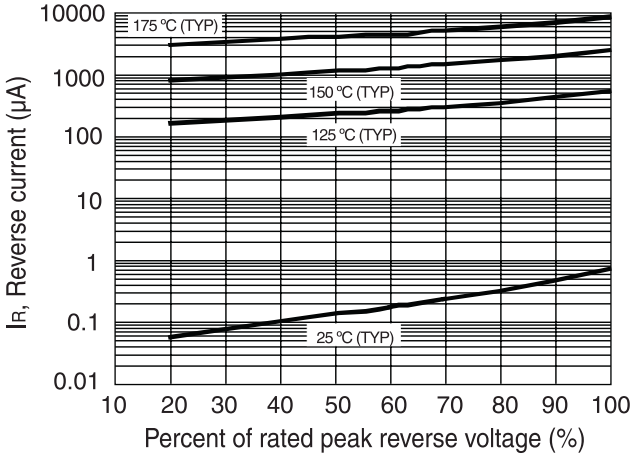
MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



TYPICAL JUNCTION CAPACITANCE



TYPICAL REVERSE CHARACTERISTIC



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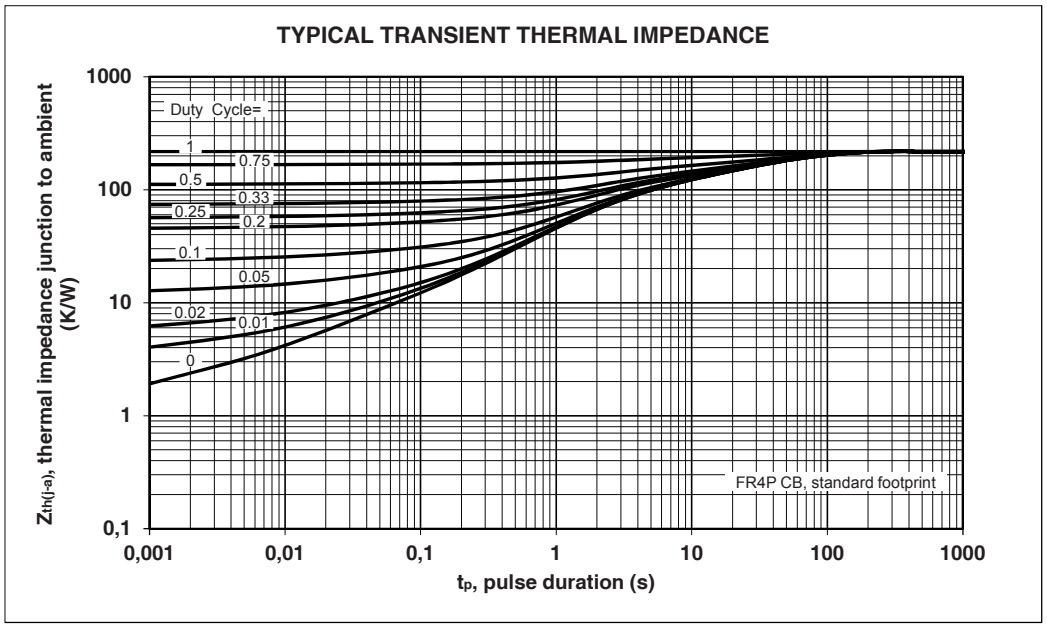

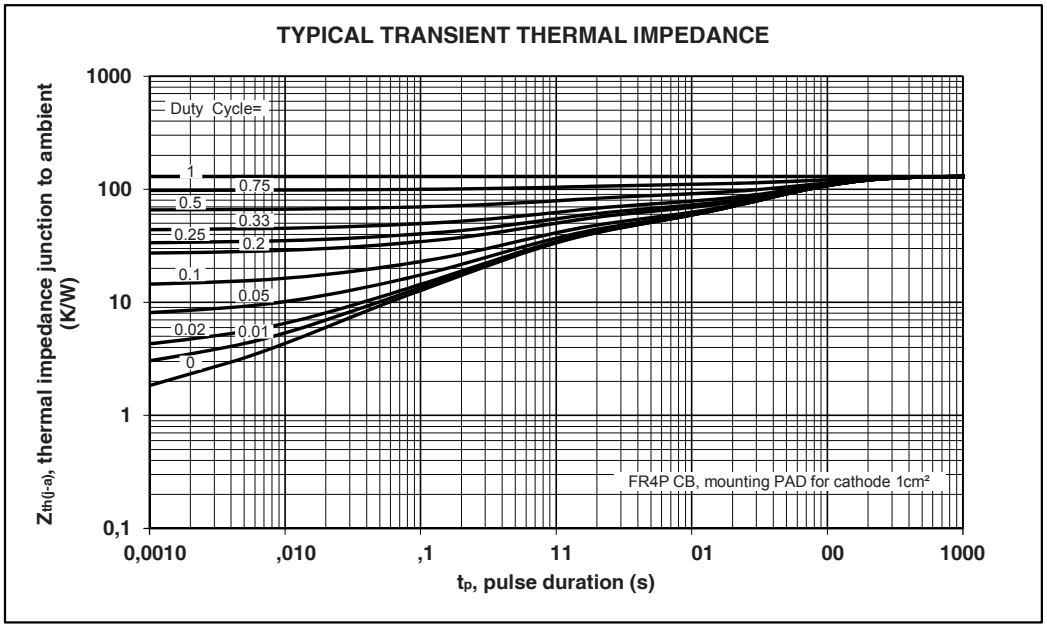

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Revision History

DATE	REVISION	DESCRIPTION OF CHANGES
14-Jan-2015	0	Original Data Sheet
14-Oct-2015	1	Update Rth specifications
15-Dec-2015	2	Include IR and VF specifications in table and Cj conditions
02-Mar-2016	3	Include Trr and VFRM specifications in table and update Cj and IR
02-Jan-2018	4	Update Typical Transient Thermal Impedance Graphs

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