





## 3.0 Amp. Surface Mount High Temperature Schottky Barrier Rectifier

<p><b>SOD128</b></p> 	<p><b>Voltage</b> 60 V</p> <p><b>Current</b> 3.0 A</p>
	<p><b>FEATURE</b></p> <ul style="list-style-type: none"> <li>Low profile package</li> <li>Ideal for automated placement</li> <li>Guardring for overvoltage protection</li> <li>Low power losses, high efficiency</li> <li>Low forward voltage drop</li> <li>High forward surge current capability</li> <li>Solder dip 260 °C, 10s</li> <li>AEC-Q101 qualified</li> <li>Component in accordance to RoHS 2011/65/EU and WEEE 2002/96/EC</li> <li>Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C</li> <li>Very low leakage current</li> </ul> <div style="text-align: right;">    </div>
	<p><b>MECHANICAL DATA</b></p> <ul style="list-style-type: none"> <li><b>Case:</b> SOD128. Epoxy meets UL 94V-0 flammability rating.</li> <li><b>Polarity:</b> Color band denotes cathode end.</li> <li><b>Terminals:</b> 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.</li> <li><b>HE3 suffix</b> for high reliability grade, meets JESD 201 class 2 whisker test.</li> </ul>
	<p><b>TYPICAL APPLICATIONS</b></p> <p>Used in low voltage high frequency inverters, freewheeling, dc-to-dc converters, and polarity protection applications.</p>

### Maximum Ratings and Electrical Characteristics at 25 °C

Marking Code		FSSH36Z
		Z4
$V_{RRM}$	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)	3.0 A
$I_{FSM}$	8,3 ms. Peak Forward Surge Current (Jedec Method)	125 A
$V_F$	Maximum Instantaneous Forward Voltage @ $I_F = 3$ A (Note 1)	0.70 V
$I_R$	Maximum DC Reverse Current at Rated DC Blocking Voltage (Note 2)	5 $\mu$ A
$T_j$	Operating Temperature Range	- 55 to + 175 °C
$T_{stg}$	Store Temperature Range	- 65 to + 175 °C
$C_j$	Typical Junction Capacitance	120 pF
$R_{th(j-a)}$	Maximum Thermal Resistance (Note 3) Junction to Ambient (Note 4)	220 °C/W
$R_{th(j-l)}$	Maximum Thermal Resistance Junction to Lead	145 °C/W
		17 °C/W

Notes: 1. Pulse Test: 300 $\mu$  Pulse Width, 1% Duty Cycle

2. Pulse test: Pulse Width  $\leq$  40ms

3. Device mounted on an FR4 PCB, standard footprint

4. Device mounted on an FR4 PCB, mounting pad for cathode 1cm<sup>2</sup>

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### Static Electrical Characteristics

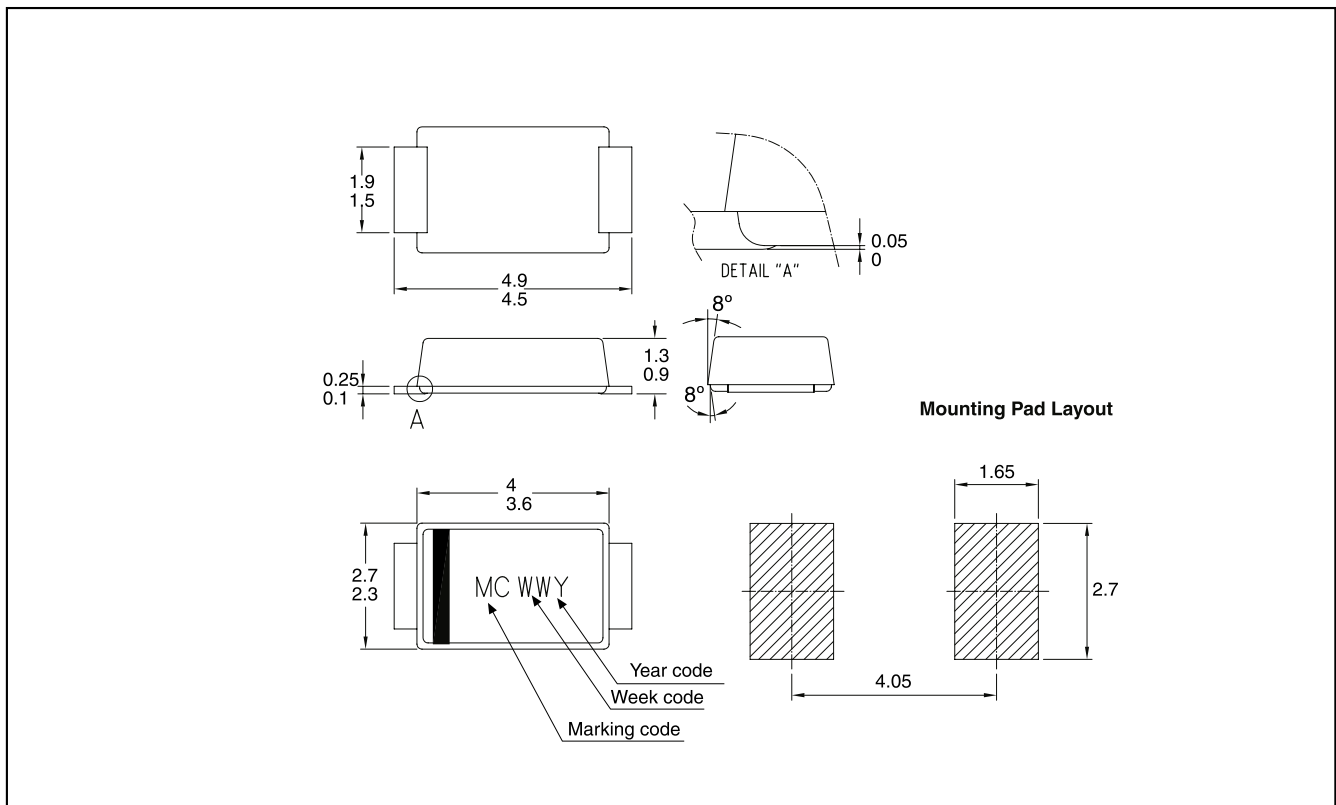
SYMBOL	PARAMETER	TEST CONDITIONS	Max.	Unit
$V_F$	Max. Instantaneous Forward Voltage	$T_j = -40\text{ }^\circ\text{C}$ $I_F = 3\text{ A}$	0.80	V
		$T_j = 25\text{ }^\circ\text{C}$ $I_F = 3\text{ A}$	0.70	
		$T_j = 125\text{ }^\circ\text{C}$ $I_F = 3\text{ A}$	0.65	
$I_R$	Max. DC Reverse Leakage Current	$T_j = 125\text{ }^\circ\text{C}$ $V_R = 60\text{ V}$	2	mA
		$T_j = 150\text{ }^\circ\text{C}$ $V_R = 60\text{ V}$	8	
		$T_j = 175\text{ }^\circ\text{C}$ $V_R = 60\text{ V}$	20	

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**Ordering information**

PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
FSSH36Z HE3 TRTB	TRTB	13" diameter tape and reel	10,000	0.0180

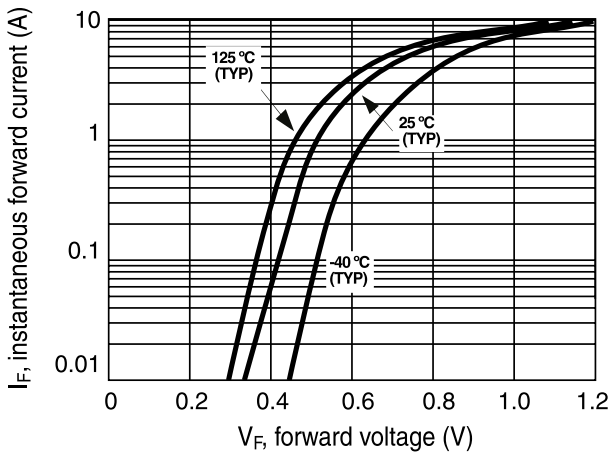
**Package Outline Dimensions: (mm) SOD128**



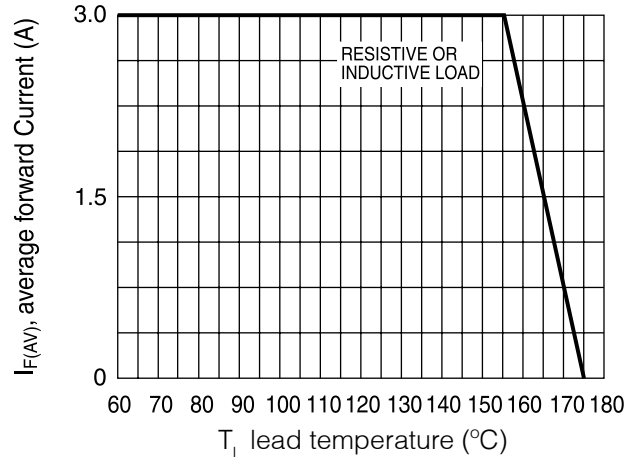
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**Rating and Characteristics** (Ta 25 °C unless otherwise noted)

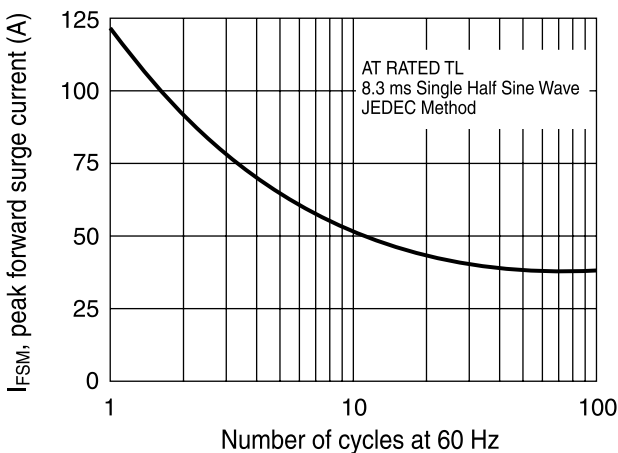
**TYPICAL FORWARD CHARACTERISTIC**



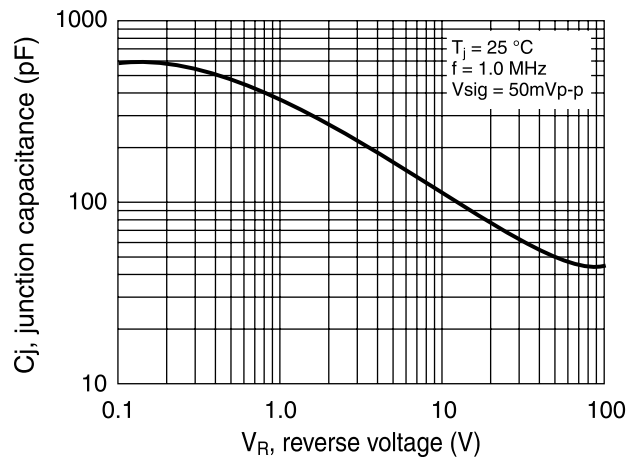
**MAXIMUM FORWARD CURRENT DERATING CURVE**



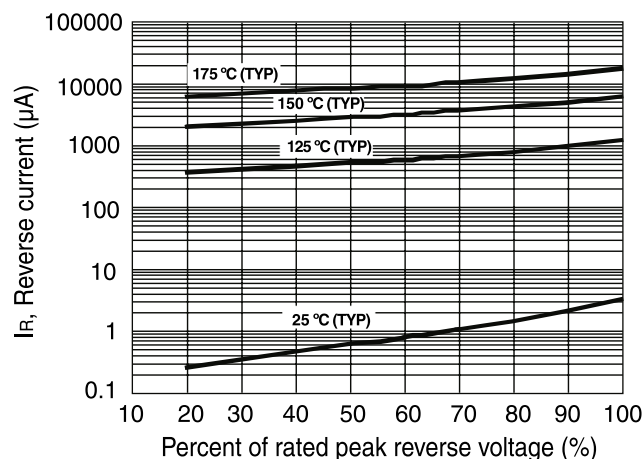
**MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**TYPICAL JUNCTION CAPACITANCE**

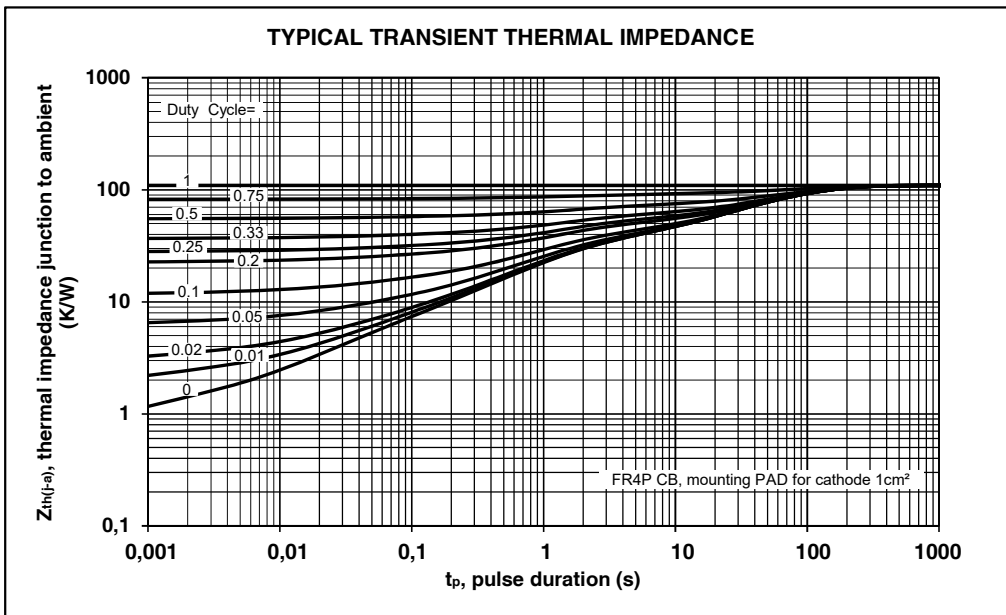
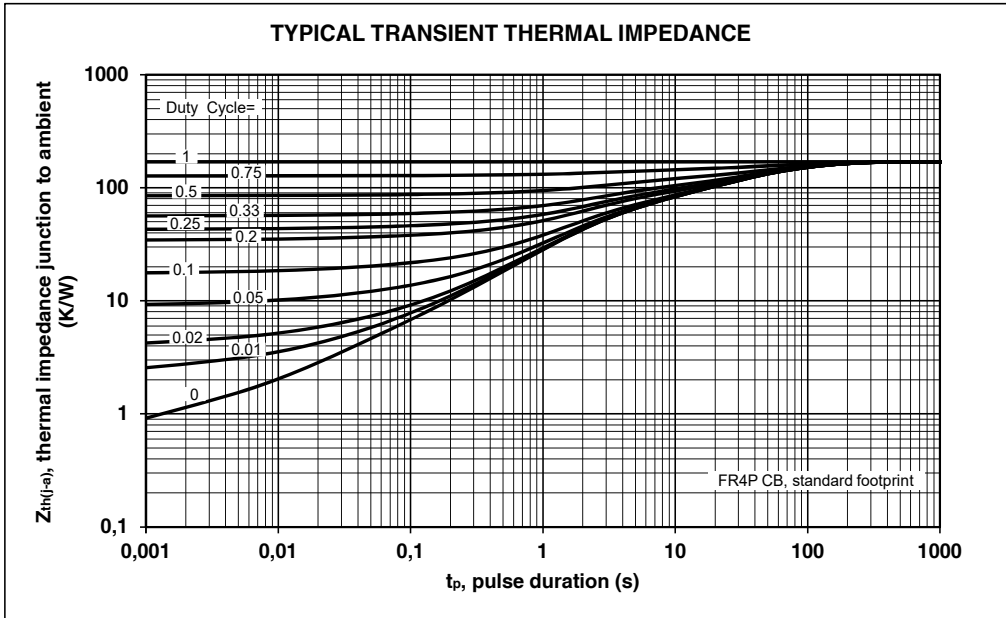


**TYPICAL REVERSE CHARACTERISTIC**

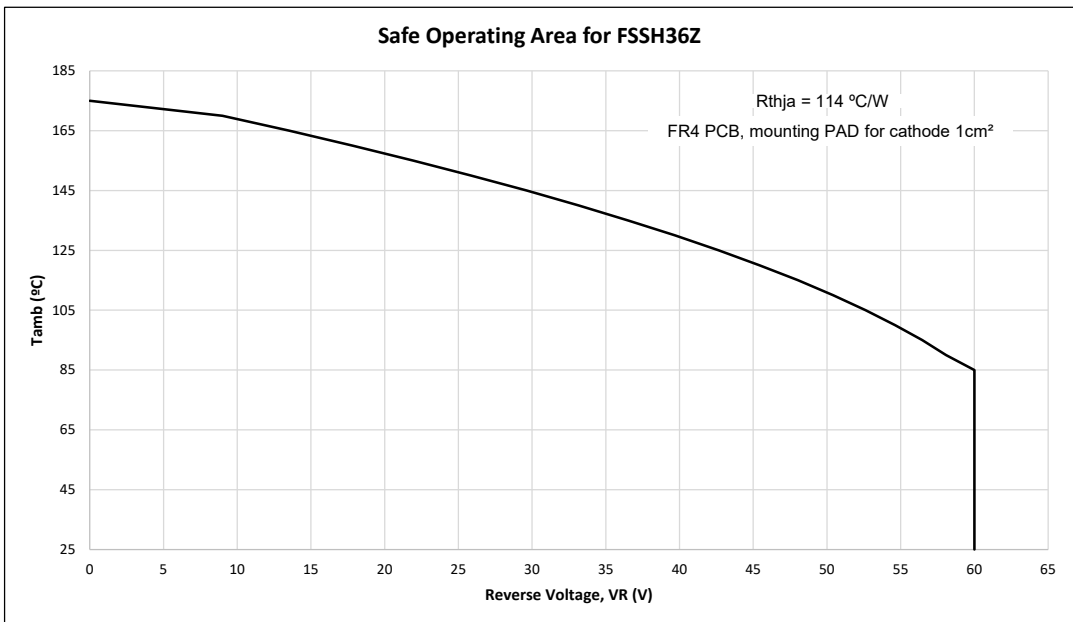
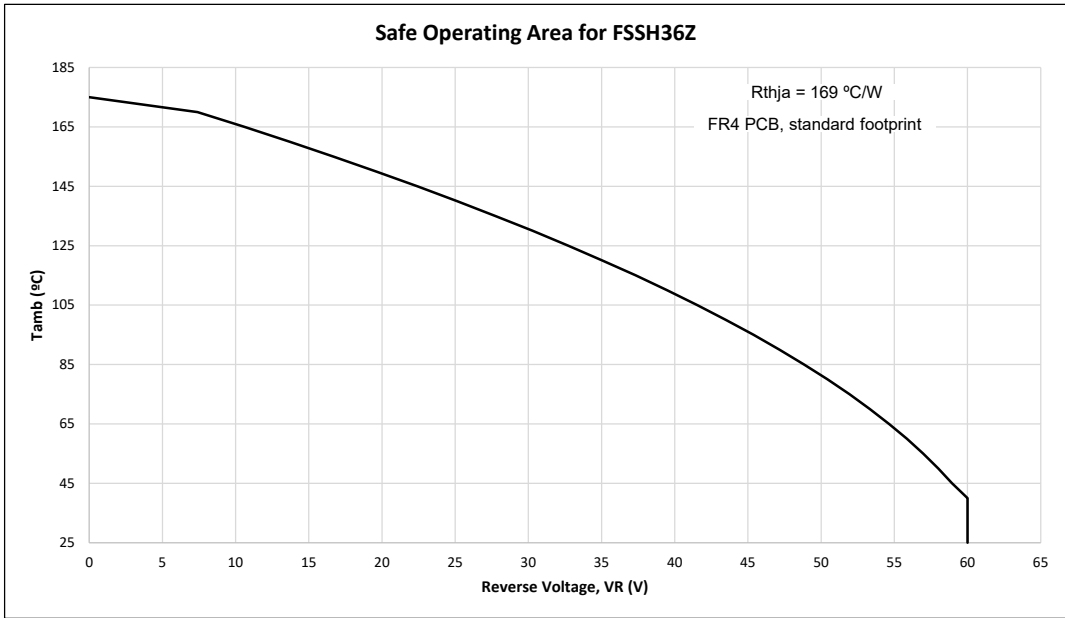


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**Rating and Characteristics (Ta 25 °C unless otherwise noted)**



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**3.0 Amp. Surface Mount High Temperature Schottky Barrier Rectifier****Revision History**

DATE	REVISION	DESCRIPTION OF CHANGES
18-Dec-2017	0	Original Data Sheet
28-Feb-2018	1	Update VR condition of IR leakage maximum limit at 150°C and 175°C
30-Mar-2022	2	Correct Maximum Thermal Resistance parameters and include safe operating graphs

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