

### Product Summary (@T<sub>A</sub> = +25°C)

V <sub>RRM</sub> (V)	I <sub>O</sub> (A)	V <sub>F(MAX)</sub> (V)	I <sub>R(MAX)</sub> (µA)
60	2	0.76	0.3

### Description and Applications

The SDM2M60S1F is a single rectifier packaged in SOD123F (Standard), offering very low forward voltage drop (V<sub>F</sub>) and excellent low reverse leakage stability at high temperatures.

- DC-DC Converter
- AC-DC Rectifier
- Reverse Polarity Protection
- SMPS

### Features and Benefits

- Superior Reverse Avalanche Capability
- Patented Interlocking Clip Design for High Surge Current Capacity
- Soft, Fast Switching Capability
- +175°C Operation Junction Temperature
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

### Mechanical Data

- Case: SOD123F (Standard)
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Matte Tin Finish Annealed over Copper Leadframe. Solderable per MIL-STD-202, Method 208 (e3)
- Polarity: Cathode Band
- Weight: 0.015 grams (Approximate)

SOD123F (Standard)

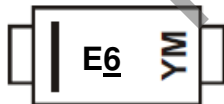


### Ordering Information (Note 4)

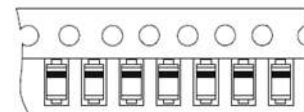
Part Number	Case	Packaging
SDM2M60S1F-7	SOD123F (Standard)	3000/Tape & Reel

- Notes:
1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.
  2. See [http://www.diodes.com/quality/lead\\_free.html](http://www.diodes.com/quality/lead_free.html) 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. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

### Marking Information



E6 = Product Type Marking Code  
 YM = Date Code Marking  
 Y = Year (ex: E = 2017)  
 M = Month (ex: 2 = February)



#### Date Code Key

Year	2015	2016	2017	2018	2019	2020	2021	2022
Code	C	D	E	F	G	H	I	J

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

**Maximum Ratings** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub>	60	V
Average Rectified Output Current	I <sub>O</sub>	2	A
Non-Repetitive Peak Forward Surge Current 8.3mS	I <sub>FSM</sub>	60	A

**Thermal Characteristics**

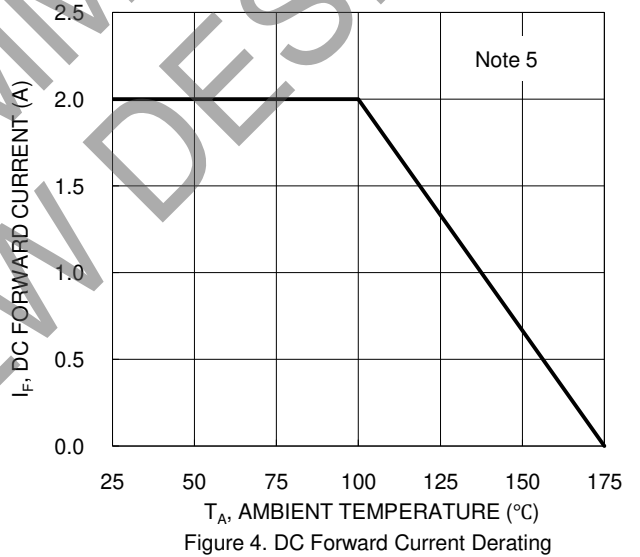
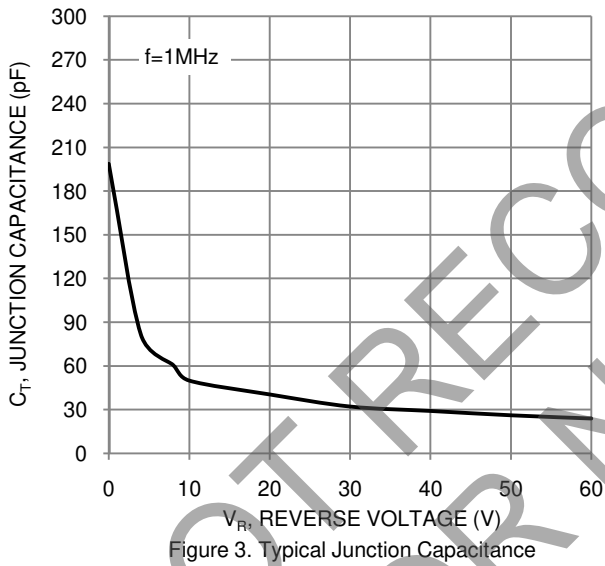
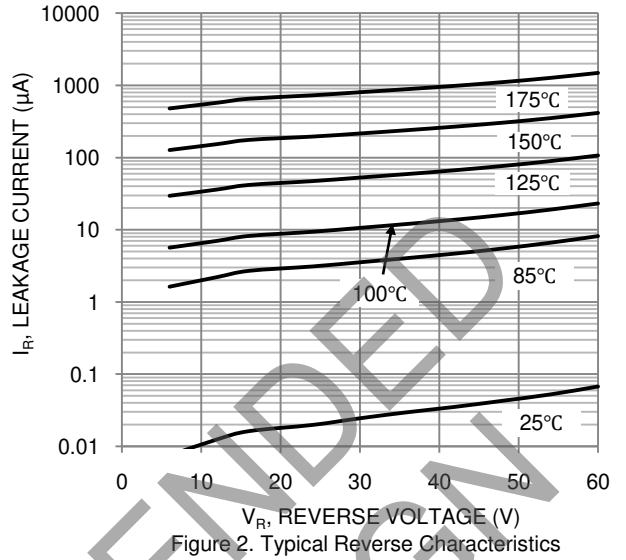
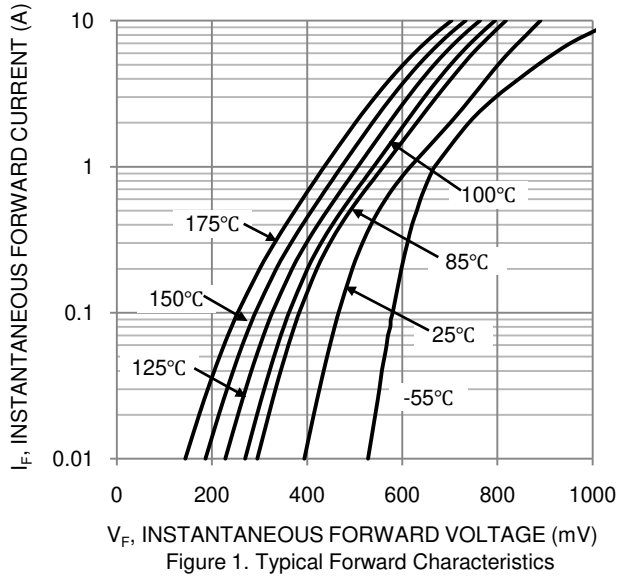
Characteristic	Symbol	Value	Unit
Maximum Thermal Resistance Junction to Ambient (Note 5)	R <sub>θJA</sub>	70	°C/W
Maximum Thermal Resistance Junction to Case (Note 5)	R <sub>θJC</sub>	20	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175	°C

**Electrical Characteristics** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V <sub>F</sub>	—	0.62	0.66	V	I <sub>F</sub> = 1A, T <sub>J</sub> = +25°C
		—	0.70	0.76		I <sub>F</sub> = 2A, T <sub>J</sub> = +25°C
Leakage Current (Note 6)	I <sub>R</sub>	—	0.07	0.3	μA	V <sub>R</sub> = 60V, T <sub>J</sub> = +25°C
		—	110	—		V <sub>R</sub> = 60V, T <sub>J</sub> = +125°C
Junction Capacitance	C <sub>J</sub>	—	80	—	pF	V <sub>R</sub> = 4V, T <sub>J</sub> = +25°C

Notes: 5. Device mounted on FR-4 substrate, 0.4"×0.5", 2oz, single-sided, PC boards with 0.2"×0.25" copper pad.  
6. Short duration pulse test used to minimize self-heating effect.

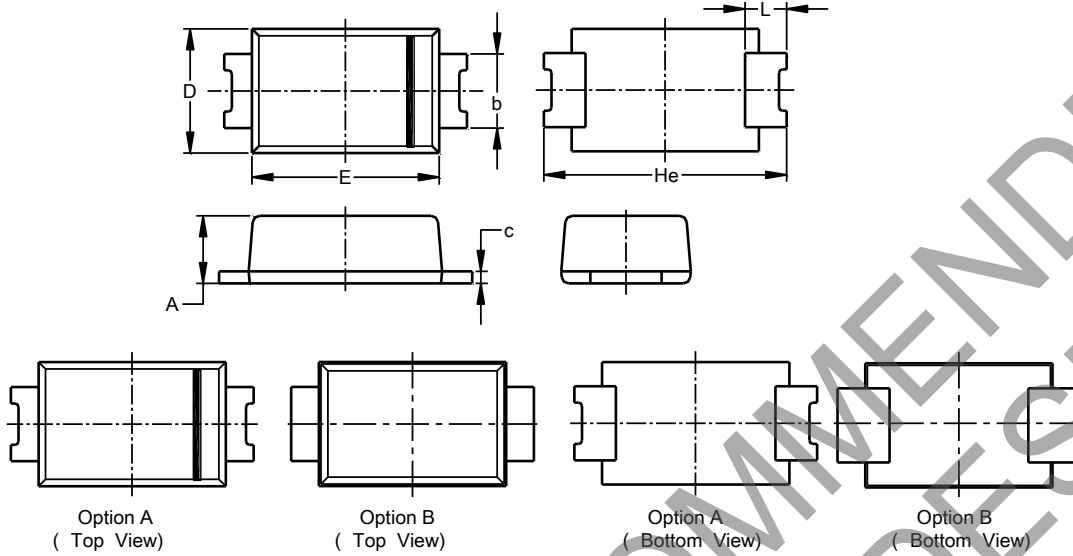
NOT RECOMMENDED FOR NEW DESIGN



**Package Outline Dimensions**

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

**SOD123F (Standard)**

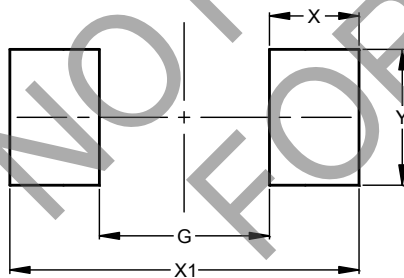


SOD123F (Standard)			
Dim	Min	Max	Typ
A	0.81	1.15	-
b	0.80	1.35	-
c	0.05	0.30	-
D	1.70	1.90	1.80
E	2.60	2.80	2.70
He	3.30	3.70	3.50
L	0.35	0.85	-
All Dimensions in mm			

**Suggested Pad Layout**

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

**SOD123F (Standard)**



Dimensions	Value (in mm)
G	1.90
X	1.00
X1	3.90
Y	1.50

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