



SBR2M60S1FQ

2A SBR SUPER BARRIER RECTIFIER

Product Summary (@T_A = +25°C)

V _{RRM} (V)	I _O (A)	V _F Max (V)	I _R Max (μA)
60	2	0.70	0.8

Description

The SBR2M60S1FQ is a single rectifier packaged in SOD123F, offering very low forward voltage drop (V_F) and excellent low reverse leakage stability at high temperatures.

Applications

- 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
- Patented Super Barrier Rectifier SBR[®] Technology
- 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)
- Qualified to AEC-Q101 Standards for High Reliability
- PPAP Capable (Note 4)

Mechanical Data

- Case: SOD123F
- 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 ⁽³⁾
- Polarity: Cathode Band
- Weight: 0.0016 grams (Approximate)

SOD123F



Top View

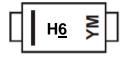
Ordering Information (Note 5)

Part Number	Case	Packaging
SBR2M60S1FQ-7	SOD123F	3,000/Tape & Reel

Notes:

- 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. Automotive products are AEC-Q101 qualified and are PPAP capable. Refer to https://www.diodes.com/quality/.
- 5. For packaging details, go to our website at https://www.diodes.com/design/support/packaging/diodes-packaging/.

Marking Information



H6 = Product Type Marking Code YM = Date Code Marking Y = Year (ex: F = 2018) M = Month (ex: N = November)

Date Code Key

Year	2015	2016	2017	2018	2019	2020	2021	2022
ı cui	2010	2010	2017	2010	2010	2020	2021	LULL
Code	С	D	Е	F	G	Н	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	0	Ν	D



Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM}	60	V
Average Rectified Output Current	Io	2	Α
Non-Repetitive Peak Forward Surge Current 8.3ms	I _{FSM}	30	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Maximum Thermal Resistance Junction to Ambient (Note 6)	R _{0JA}	100	°C/W
Maximum Thermal Resistance Junction to Case (Note 6)	R ₀ JC	40	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +175	°C

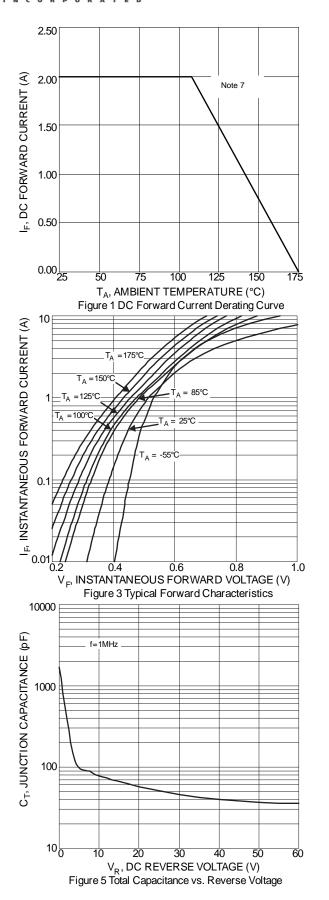
Electrical Characteristics (@ $T_A = +25^{\circ}C$, unless otherwise specified.)

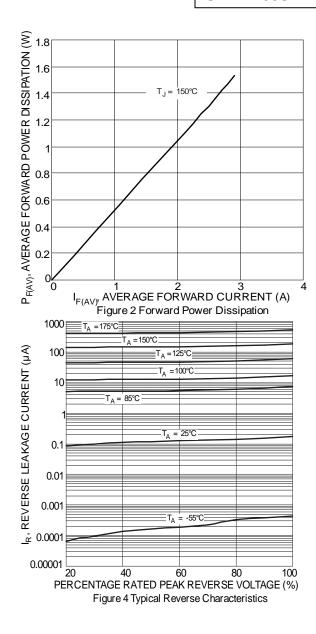
Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Forward Voltage Drop	VF	1 1	0.52 0.60	0.60 0.70	\ \/	I _F = 1A, T _J = +25°C I _F = 2A, T _J = +25°C
Leakage Current (Note 8)	I _R	_	0.2 60	0.8 —	• .	$V_R = 60V, T_J = +25$ °C $V_R = 60V, T_J = +125$ °C

Notes:

- 6. Device mounted on FR-4 substrate, 0.4"*0.5", 2oz, single-sided, PC boards with 0.2"*0.25" copper pad.
- 7. Device mounted on 1-inch FR-4.
- 8. Short duration pulse test used to minimize self-heating effect.





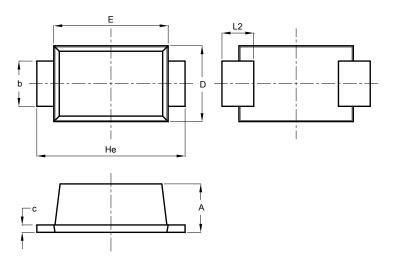




Package Outline Dimensions

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

SOD123F

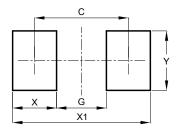


	SOD123F								
Dim	Min	Max	Тур						
Α	0.81	1.15	-						
b	0.80	1.05	-						
C	0.05	0.30	-						
D	1.70	1.90	1.80						
Е	2.60	2.80	2.70						
He	3.30	3.70	3.50						
L2	0.35	0.85	-						
AII [Dimen	sions	in mm						

Suggested Pad Layout

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

SOD123F



Dimensions	Value (in mm)
С	2.86
G	1.52
Х	1.34
X1	4.20
Υ	1.80



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