

Trench MOS Barrier Schottky Rectifier

Reverse Voltage - 100 V

Forward Current - 10 A

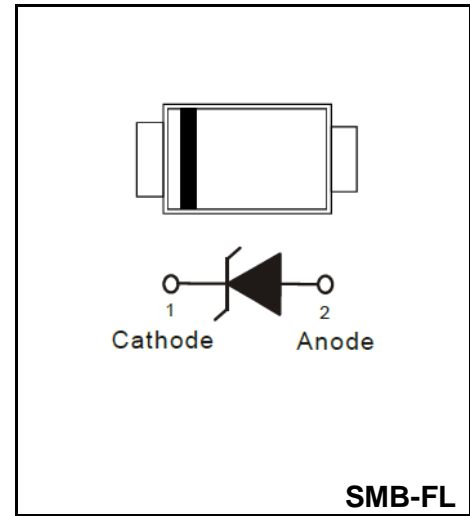


FEATURES

- ◆ Advanced trench technology
- ◆ Low forward voltage drop
- ◆ Low power losses
- ◆ High efficiency operation
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- ◆ Case: SMB-FL
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026



Maximum Ratings (Per Leg) at Ta=25°C unless otherwise specified

Parameter		Symbols	Value	Units
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	100	V
Maximum RMS voltage		V_{RMS}	100	V
Maximum DC Blocking Voltage		V_{DC}	100	V
Maximum Average Forward Rectified Current	Per diode	$I_{F(AV)}$	10	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave superimposed on rated load per diode		I_{FSM}	140	A
Operating Temperature Range		T_J	-55 ~ +150	°C
Storage Temperature Range		T_{STG}	-55 ~ +150	°C
Typical Thermal Resistance Per diode(munted on FR-4 PCB)	SMB-FL	$R_{\theta JC}$	20	°C/W

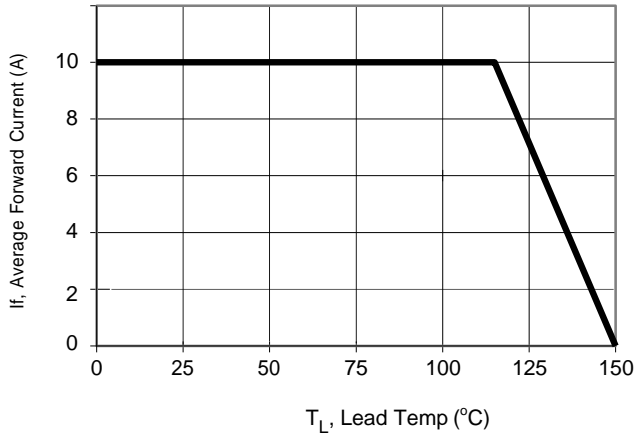
Note1: Thermal resistance from Junction to case per leg mounted on heatsink.

Electrical Characteristics (Per Leg) unless otherwise specified

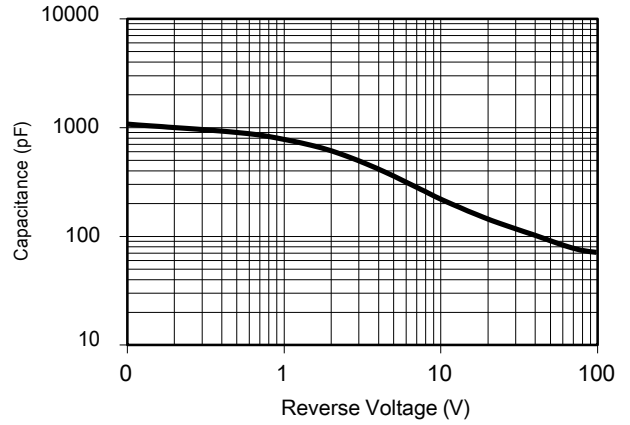
Characteristics		Symbols	Value		Units
Forward Voltage Drop(Note2)		V_F	Typ	Max	V
at $I_F=5A$ Instantaneous forward voltage per diode	TA=25°C		0.59	-	
	TA=125°C		0.53	-	
at $I_F=10A$ Instantaneous forward voltage per diode	TA=25°C		0.75	0.79	
	TA=125°C	0.65	0.69		
Instantaneous reverse current per diode at rated reverse voltage	TA=25°C	I_R	5	100	uA
	TA=125°C		7	20	mA

**Note2: (1)Pulse test: 300 μs pulse width, 1 % duty cycle
(2) Pulse test: Pulse width ≤ 40 ms**

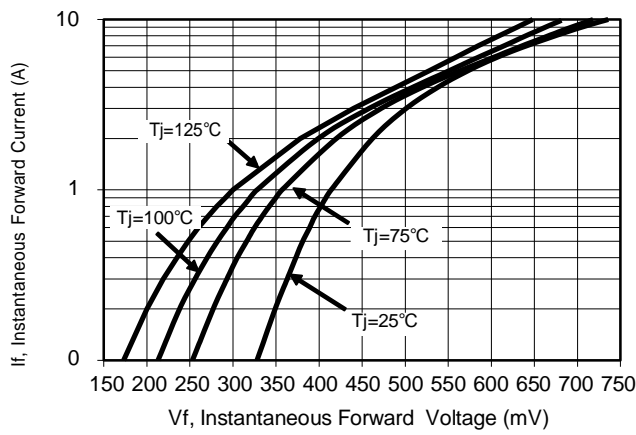
RATINGS AND CHARACTERISTIC CURVES



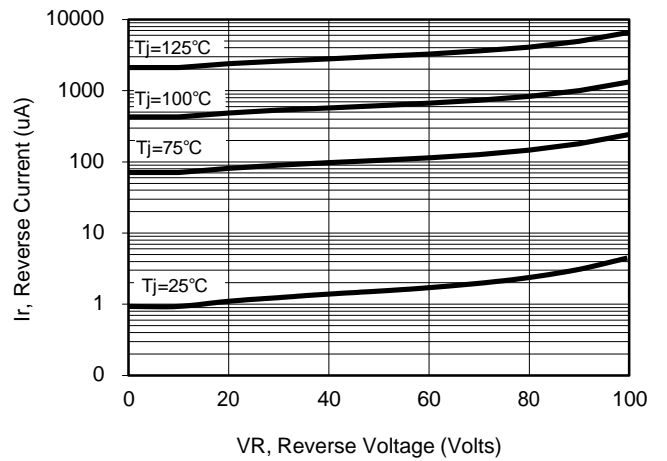
Current Derating, Case



Typical Junction Capacitance



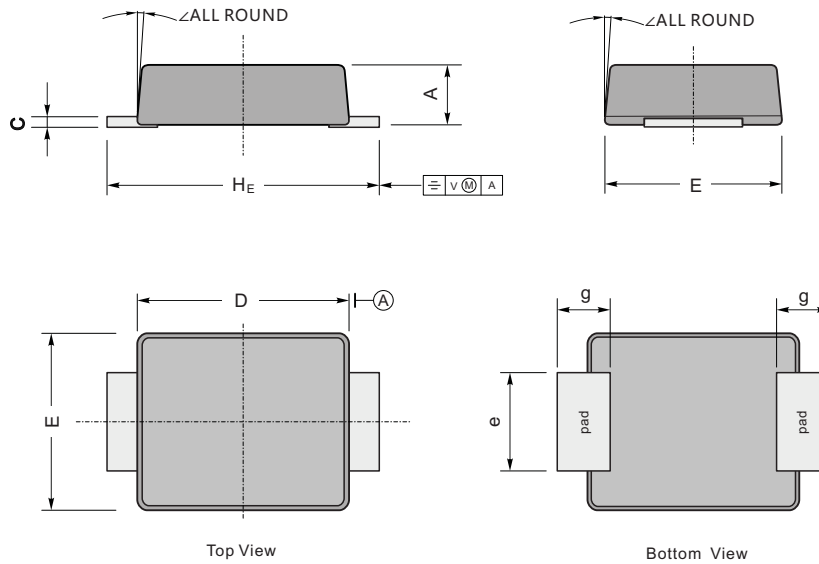
Typical Forward Voltage



Typical Reverse Current

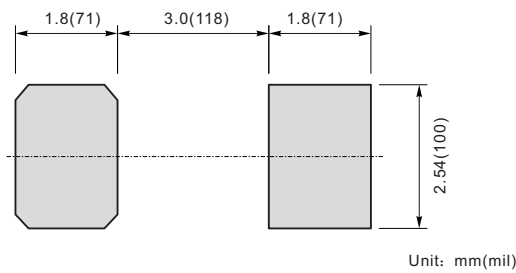
Package Outline SMBF

Plastic surface mounted package; 2 leads



UNIT		A	C	D	E	H_E	e	g	\angle
mm	max	1.3	0.26	4.4	3.7	5.5	2.2	1.0	9°
	min	1.1	0.18	4.2	3.5	5.1	1.9		
mil	max	51	10	173	146	216	86		
	min	43	7	165	138	200	75		

The recommended mounting pad size



Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SMBF	Tape/Reel, 13" reel	5000	EIA-481-1