

200mA, 250V Surface Mount Switching Diode

FEATURES

- Low power loss, high efficiency
- High surge current capability
- Hermetically sealed glass
- RoHS Compliant

APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- Lighting application
- On-board DC/DC converter

MECHANICAL DATA

- Case: MMELF
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Polarity: Indicated by cathode band
- Weight: 30.60mg (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
I_F	200	mA
V_{RRM}	250	V
I_{FSM}	4	A
V_F at $I_F = 100\text{mA}$	1	V
$T_{J\text{MAX}}$	200	°C
Package	MMELF	
Configuration	Single die	



MMELF



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage	V_{RRM}	250	V
Forward current	I_F	200	mA
Non-repetitive peak forward surge current	I_{FSM}	t = 1s	1 A
		t = 1 μ s	4 A
Junction temperature range	T_J	-65 to +200	°C
Storage temperature range	T_{STG}	-65 to +200	°C

THERMAL PERFORMANCE			
PARAMETER	SYMBOL	LIMIT	UNIT
Junction-to-ambient thermal resistance	$R_{\theta JA}$	300	°C/W

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage ⁽¹⁾	$I_F = 100\text{mA}, T_J = 25^\circ\text{C}$	V_F	-	1	V
Reverse current @ rated V_R ⁽²⁾	BAV101 $V_R = 100\text{V}, T_J = 25^\circ\text{C}$	I_R	-	100	nA
	BAV103 $V_R = 200\text{V}, T_J = 25^\circ\text{C}$		-	100	nA
Junction capacitance	1MHz, $V_R = 0\text{V}$	C_J	-	4	pF

Notes:

1. Pulse test with $PW = 0.3\text{ms}$
2. Pulse test with $PW = 30\text{ms}$

ORDERING INFORMATION		
ORDERING CODE	PACKAGE	PACKING
BAV101 LOG	MMELF	10,000 / 13" Tape & Reel
BAV103 LOG	MMELF	10,000 / 13" Tape & Reel

CHARACTERISTICS CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.1 Reverse Current VS. Junction Temperature

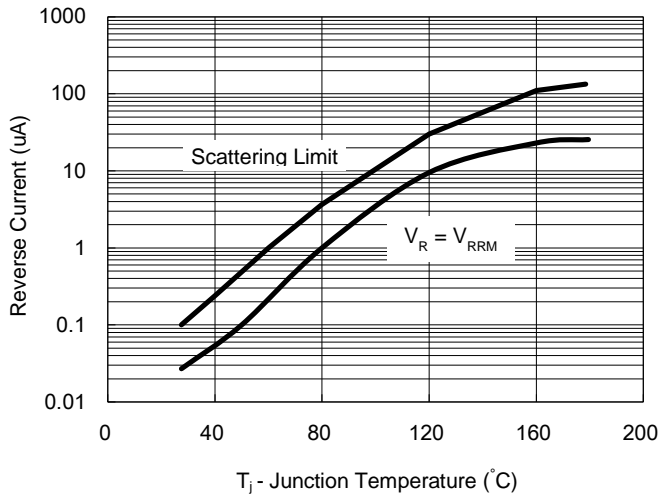


Fig.2 Forward Current VS. Forward Voltage

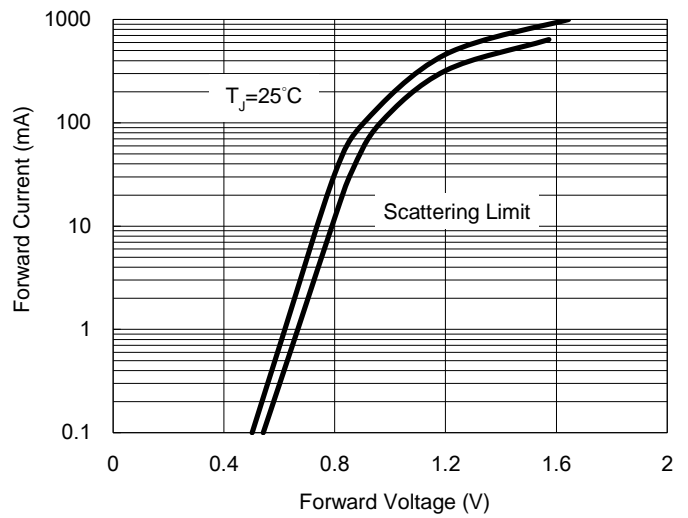
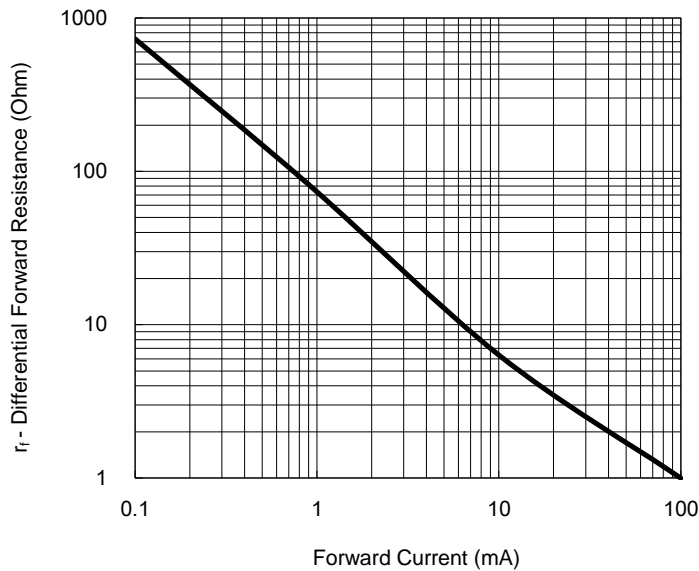
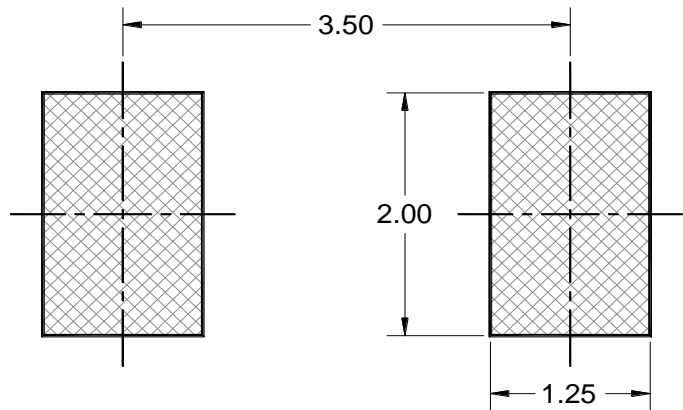
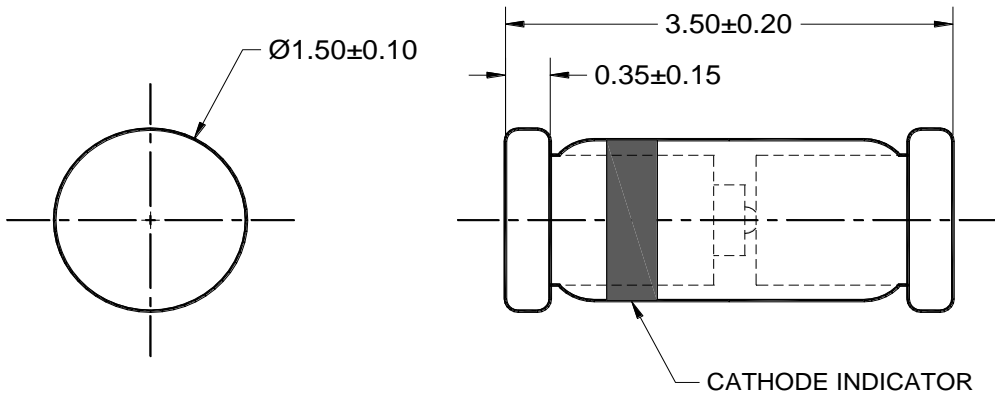


Fig.3 Differential Forward Resistance VS. Forward Current



PACKAGE OUTLINE DIMENSIONS

MMELF



SUGGESTED PAD LAYOUT

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
3. PACKAGE OUTLINE REFERENCE: JEDEC DO-213, VARIATION AA, ISSUE D.
4. DWG NO. REF: HQ2SD07-MMELFG-044 REV A.

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