

## 200mA, 250V Switching Diode

### FEATURES

- Low power loss, high efficiency
- Ideal for automated placement
- High surge current capability
- Compliance to RoHS directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

### APPLICATIONS

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

### MECHANICAL DATA

- Case: MINI MELF
- Packing code with suffix "G" means green compound (halogen-free)
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Polarity: Indicated by cathode band
- Weight: 0.06 (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
$I_{F(AV)}$	200	mA
$V_{RRM}$	250	V
$I_{FSM}$	4	A
$V_F$ at $I_F=100mA$	1.00	V
$T_{J\ MAX}$	200	°C
Package	MINI MELF	
Configuration	Single dice	



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

PARAMETER	SYMBOL	PART NUMBER	UNIT
Repetitive peak reverse voltage	$V_{RRM}$	250	V
Forward current	$I_{F(AV)}$	200	mA
Non-repetitive peak forward surge current	$I_{FSM}$	1	A
		4	
Junction temperature range	$T_J$	-65 ~ 200	°C
Storage temperature range	$T_{STG}$	-65 ~ 200	°C

### THERMAL PERFORMANCE

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

<b>ELECTRICAL SPECIFICATIONS</b> ( $T_A = 25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode <sup>(1)</sup>	$I_F = 100\text{mA}$ , $T_J = 25^\circ\text{C}$	$V_F$	--	1	V
Reverse current @ rated $V_R$ per diode <sup>(2)</sup>	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	1 MHz, $V_R = 0\text{V}$	$C_J$	--	4	pF

**Notes:**

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

<b>ORDERING INFORMATION</b>				
PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
BAV10X (Note 1&2)	L0	G	MINI MELF	10K / 13" Reel
	L1			2.5K / 7" Reel

**Notes:**

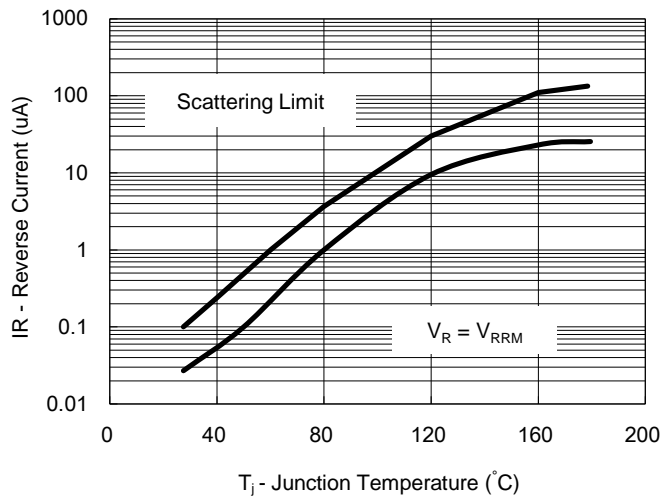
1. "x" is device code is "1" & "3"
2. Whole series with green compound

<b>EXAMPLE</b>				
EXAMPLE P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
BAV101 L0G	BAV101	L0	G	Green compound

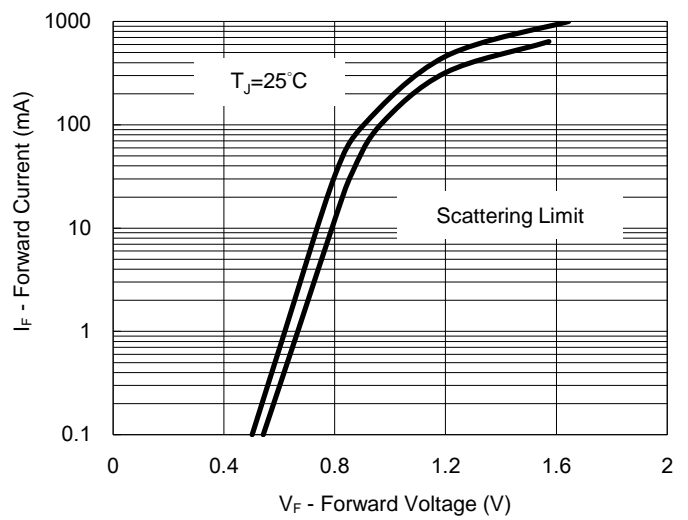
**CHARACTERISTICS CURVES**

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

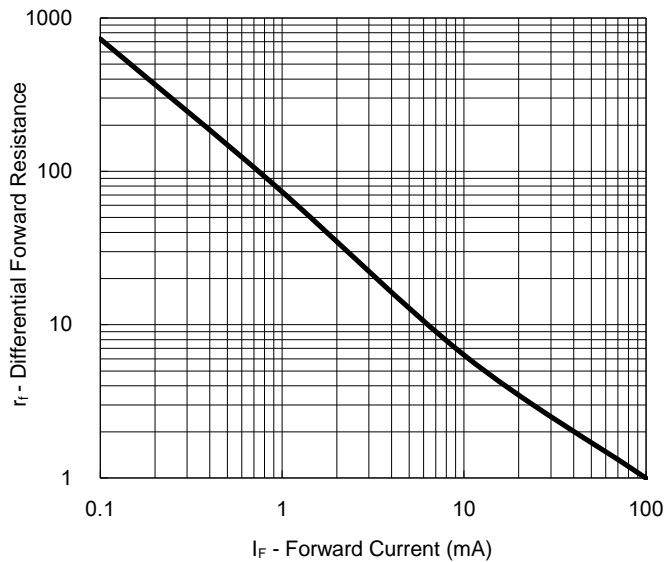
**Reverse Current VS. Junction Temperature**



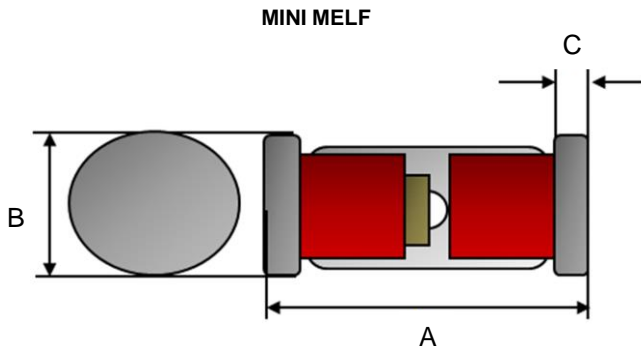
**Forward Current VS. Forward Voltage**



**Differential Forward Resistance VS. Forward Current**

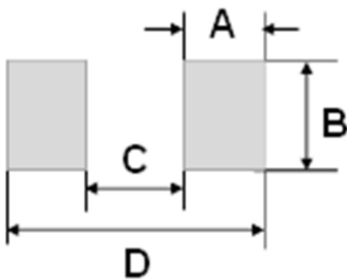


**PACKAGE OUTLINE DIMENSION**



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	3.30	3.70	0.130	0.146
B	1.40	1.60	0.055	0.063
C	0.20	0.50	0.008	0.020

**SUGGEST PAD LAYOUT**



DIM.	Unit(mm)	Unit(inch)
	Typ.	Typ.
A	1.25	0.049
B	2.00	0.079
C	2.50	0.098
D	5.00	0.197

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