200mA, 120V - 250V 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: DO-35
- Terminal: Pure tin plated leads, solderable per J-STD-002
- Polarity: Indicated by cathode band
- Weight: 101.67mg (approximately)

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
I_F	200	mA
V_{RRM}	120 - 250	V
I_{FSM}	4	A
V_F at I_F = 100mA	1	V
$T_{J\,MAX}$	175	°C
Package	DO-35	
Configuration	Single die	

Pb-Free RoHS COMPLIANT

DO-35

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

PARAMETER		SYMBOL	BAV19	BAV20	BAV21	UNIT
Marking code on the device			BAV19	BAV20	BAV21	
Repetitive peak reverse voltage		V_{RRM}	120	200	250	V
Forward current		I_F	200			mA
Non-Repetitive square wave peak forward surge current	t = 1s	I_{FSM}	1			A
	t = 1μs		4			A
Junction temperature range		T_J	-55 to +175			°C
Storage temperature range		T_{STG}	-55 to +175			°C

THERMAL PERFORMANCE

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

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)

PARAMETER		CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage[1]		I_F = 100mA, T_J = 25°C	V_F	-	1.00	V
		I_F = 200mA, T_J = 25°C		-	1.25	V
Reverse current @ rated V_R[2]	BAV19	V_R = 100 V	I_R	-	100	nA
	BAV20	V_R = 150 V		-	100	nA
	BAV21	V_R = 200 V		-	100	nA
Junction capacitance		1MHz, V_R = 0V	C_J	-	5	pF

Notes:

1. Pulse test with PW = 0.3ms
2. Pulse test with PW = 30ms

ORDERING INFORMATION

ORDERING CODE[1]	PACKAGE	PACKING
BAVx R0G	DO-35	10,000 / 14" Reel
BAVx A0G	DO-35	5,000 / Ammo Box

Notes:

1. "x" defines voltage from 120V (BAV19) to 250V (BAV21)

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Typical Forward Characteristics

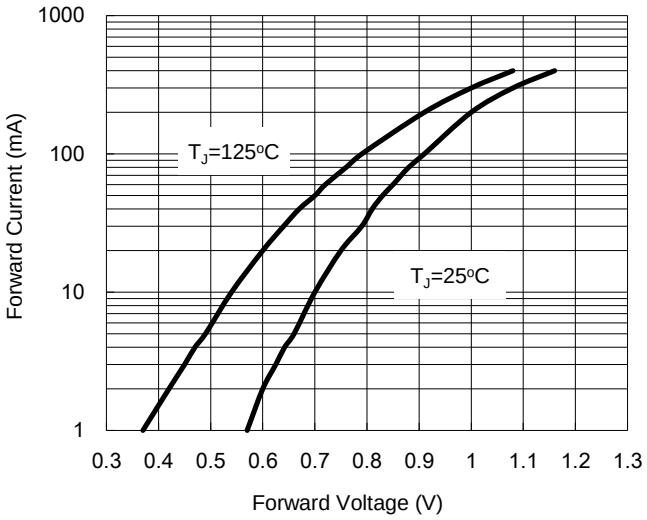


Fig.2 Reverse Current VS. Reverse Voltage

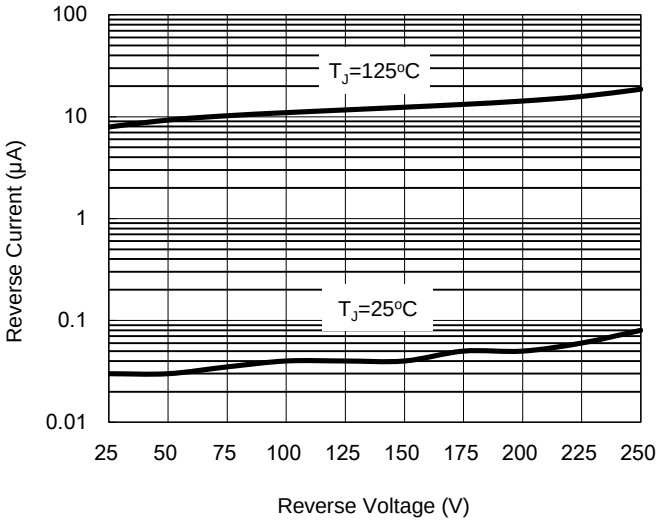


Fig.3 Admissible Power Dissipation Curve

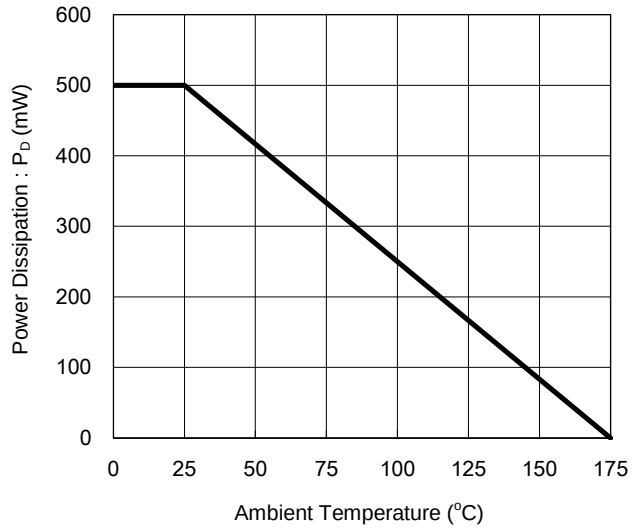
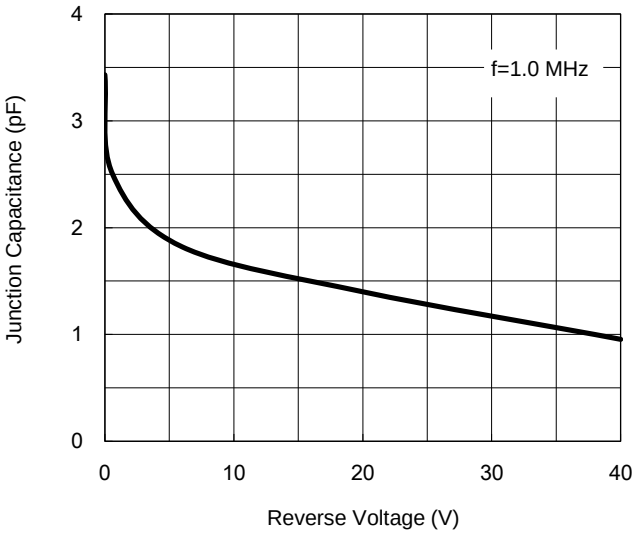
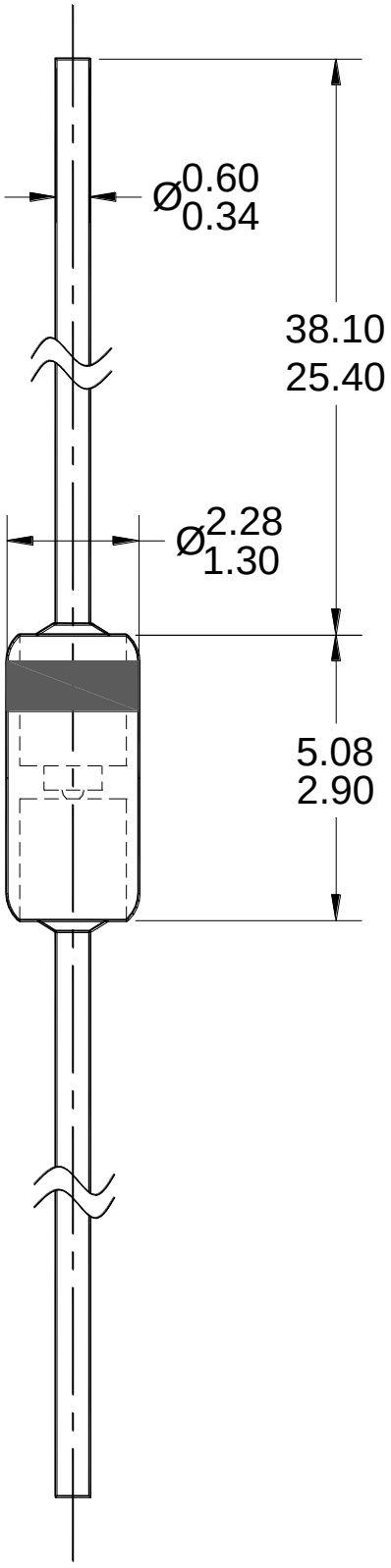


Fig.4 Typical Junction Capacitance



PACKAGE OUTLINE DIMENSIONS

DO-35



NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
3. DWG NO. REF: HQ2SD07-DO35-058 REV A.

XX = MARKING CODE

MARKING DIAGRAM

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