200mA,120-250V Switching Diode

FEATURES

- Low power loss, high efficiency
- Ideal for automated placement
- High surge current capability
- Compliant 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: DO-35
- 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: 109 ± 4 mg (approximately)

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
$I_{F(AV)}$	100-200	mA
V_{RRM}	120-250	V
I_{FSM} at PW = 1μs	4	A
V_F at I_F=100mA	1.00	V
$T_{J\ MAX}$	175	°C
Package	DO-35	
Configuration	Single Die	

Pb-Free RoHS COMPLIANT HALOGEN FREE

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)						
PARAMETER		**SYMBOL**	**PART NUMBER**			**UNIT**
Marking code on the device			BAV19	BAV20	BAV21	
Reverse Breakdown Voltage	IR = 100 μA	$V_{(BR)}$	120	200	250	V
Peak Forward Surge Current	Pulse Width = 1 s , Square Wave	I_{FSM}	1			A
	Pulse Width = 1 μs , Square Wave		4			
Junction temperature range		T_J	-55 ~ 175			°C
Storage temperature range		T_{STG}	-55 ~ 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 per diode (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 per diode (2)	BAV19 VR = 100 V	I_R	--	100	nA
	BAV20 VR = 150 V				
	BAV21 VR = 200 V				
Junction capacitance	1 MHz, V_R=0V	C_J	--	5	ρF

Notes:

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

ORDERING INFORMATION				
PART NO.	**PACKING CODE**	**PACKING CODE SUFFIX**	**PACKAGE**	**PACKING**
BAVXX (Note 1&2)	R0	G	DO-35	10K / 14" Reel
	A0			5K / Box (Ammo)

Notes:

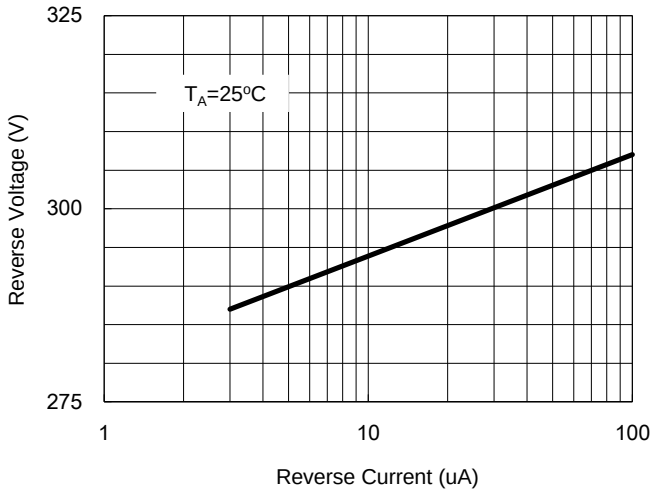
1. "xx" is Device Code from "19" to "21"
2. Whole series with green compound

EXAMPLE				
EXAMPLE P/N	**PART NO.**	**PACKING CODE**	**PACKING CODE SUFFIX**	**DESCRIPTION**
BAV19 R0G	BAV19	R0	G	Green compound

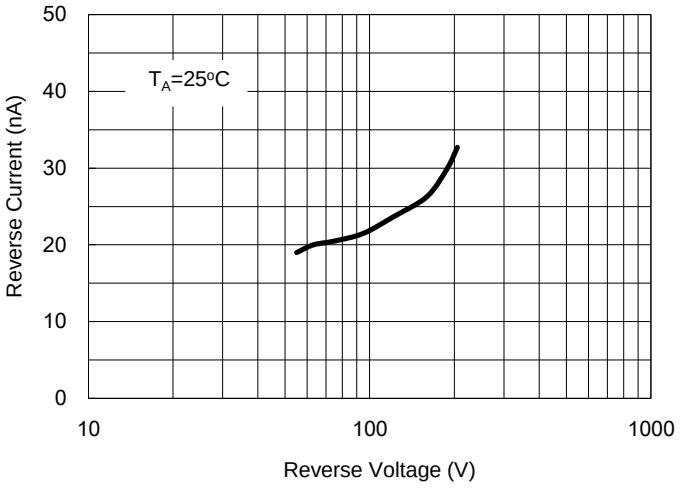
CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

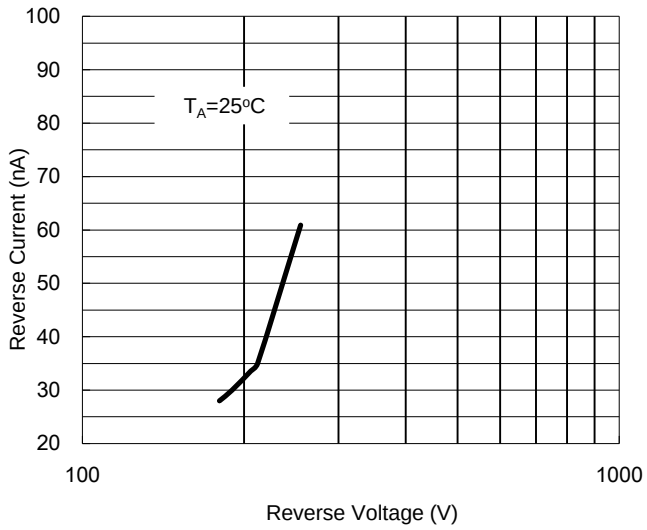
Reverse Voltage VS. Reverse Current



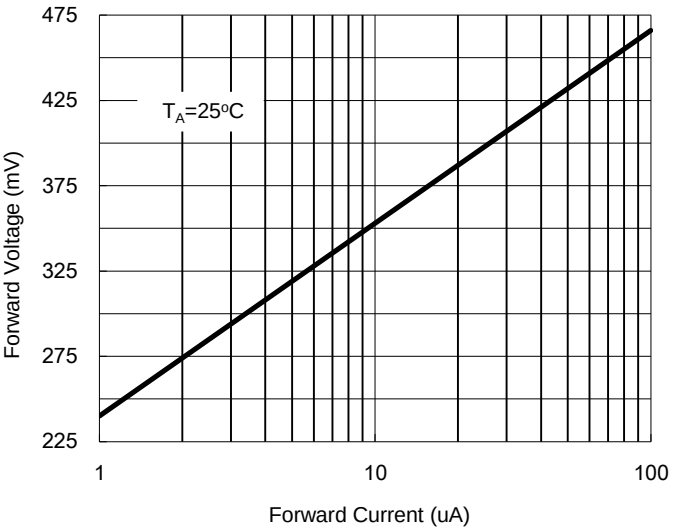
Reverse Current VS. Reverse Voltage



Reverse Current VS. Reverse Voltage



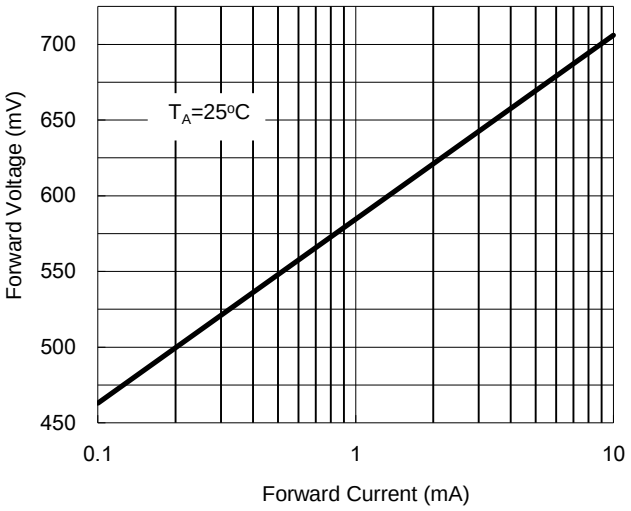
Forward Voltage VS. Forward Current



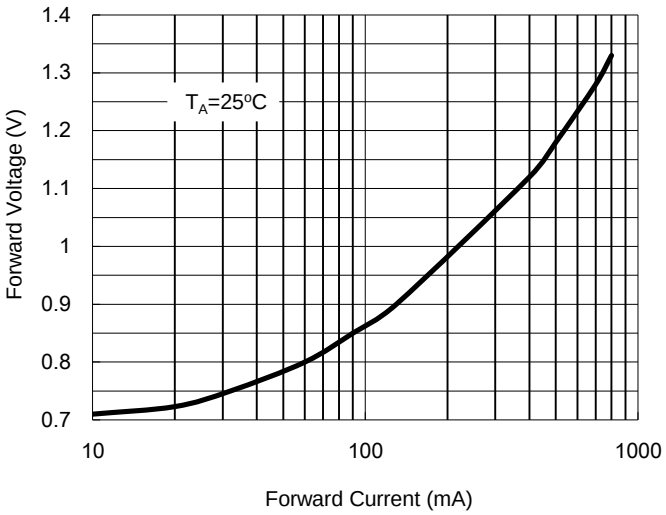
CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Forward Volatage VS. Forward Current

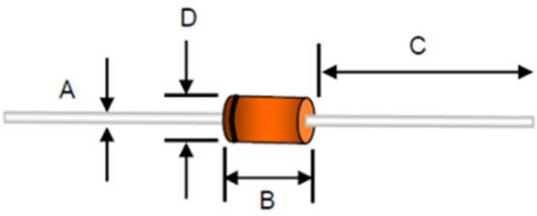


Forward Volatage VS. Forward Current



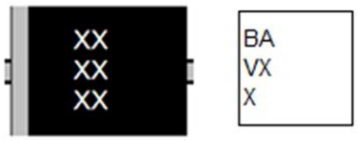
PACKAGE OUTLINE DIMENSION

DO-35



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	0.34	0.60	0.013	0.024
B	2.90	5.08	0.114	0.200
C	25.40	38.10	1.000	1.500
D	1.30	2.28	0.051	0.090

MARKING DIAGRAM



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