



#### SURFACE MOUNT SCHOTTKY DIODES

Voltage 40 V Current 0.2 A

#### **Features**

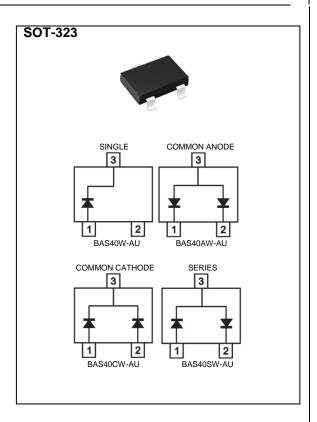
- Fast switching speed
- Surface mount package ideally suited for automatic insertion electrical identical standard JEDEC
- High conductor
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard
- AEC-Q101 qualified

#### **Mechanical Data**

• Case: SOT-323 Package

• Terminals: Solderable per MIL-STD-750, Method 2026

• Approx. Weight: 0.0002 ounces, 0.005 grams



# **Maximum Ratings and Thermal Characteristics** ( $T_A = 25^{\circ}C$ unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	40	V
Maximum Rms Voltage	$V_{RMS}$	28	V
Maximum Dc Blocking Voltage	$V_{DC}$	40	V
Maximum Average Forward Current	I <sub>F(AV)</sub>	0.2	Α
Peak Forward Surge Current : 1 s Single Half Sine- Wave Superimposed On Rated Load	I <sub>FSM</sub>	0.6	Α
Maximum Junction Capacitance  Measured at 1 MHZ And Applied $V_R = 0 \text{ V}$	C₁	5	pF
Typical Thermal Resistance	R <sub>θJA</sub> <sup>(1)</sup>	540	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-55~150	°C
Storage Temperature Range	T <sub>STG</sub>	-55~150	°C





# **Electrical Characteristics** (T<sub>A</sub> = 25°C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V <sub>F</sub>	$I_F = 1 \text{ mA}, T_J = 25 ^{\circ}\text{C}$	-	-	0.38	V
		$I_F = 10 \text{ mA}, T_J = 25 ^{\circ}\text{C}$	-	-	0.50	
		$I_F = 40 \text{ mA}, T_J = 25 ^{\circ}\text{C}$	-	-	1	
		I <sub>F</sub> = 1 mA, T <sub>J</sub> = 125 °C	-	0.21	-	
		I <sub>F</sub> = 10 mA, T <sub>J</sub> = 125 °C	-	0.35	-	
		$I_F = 40 \text{ mA}, T_J = 125 ^{\circ}\text{C}$	-	0.55	-	
Reverse Current	I <sub>R</sub> <sup>(2)</sup>	$V_R = 30 \text{ V}, T_J = 25 ^{\circ}\text{C}$	-	-	0.5	uA
		$V_R = 40 \text{ V}, T_J = 25 ^{\circ}\text{C}$	-	-	1	
		V <sub>R</sub> = 40 V, T <sub>J</sub> = 125 °C	-	22	-	

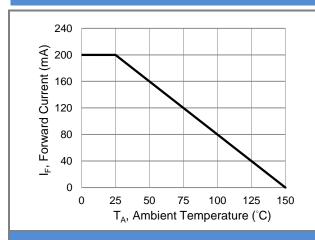
#### NOTES:

- 1. Mounted on a FR4 PCB, single-sided copper, mini pad.
- 2. Short duration pulse test used to minimize self-heating effect

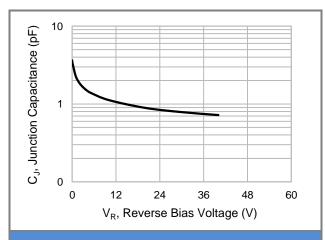




#### TYPICAL CHARACTERISTIC CURVES



**Fig.1 Forward Current Derating Curve** 



**Fig.2 Typical Junction Capacitance** 

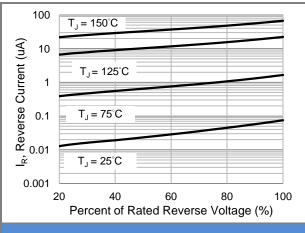
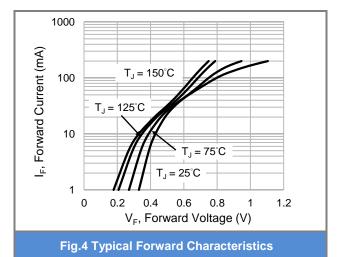


Fig.3 Typical Reverse Characteristics



(%) 120 90 100 100 100 80 90 100 90 25 50 75 100 125 150 T<sub>J</sub>, Junction Temperature (°C)

Fig.5 Operating Temperature Derating Curve

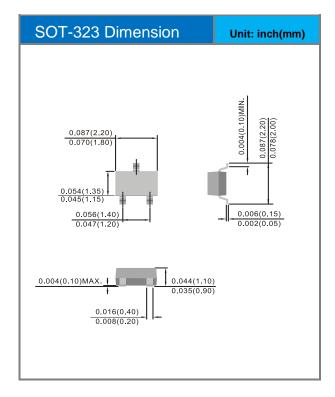


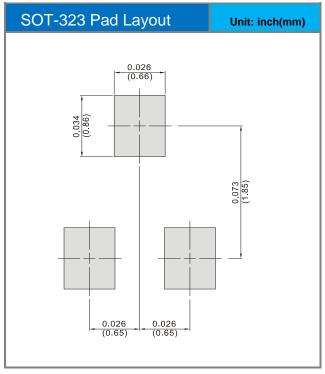


### **Part No Packing Code Version**

Part No Packing Code	Package Type	Packing Type	Marking	Version
BAS40W-AU_R1_000A1	SOT-323	3K / 7" Reel	S40	Halogen free
BAS40AW-AU_R1_000A1	SOT-323	3K / 7" Reel	S42	Halogen free
BAS40CW-AU_R1_000A1	SOT-323	3K / 7" Reel	S43	Halogen free
BAS40SW-AU_R1_000A1	SOT-323	3K / 7" Reel	S44	Halogen free

### **Packaging Information & Mounting Pad Layout**









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