



BAW56

Preliminary

DIODE

DUAL SURFACE MOUNT SWITCHING DIODE

DESCRIPTION

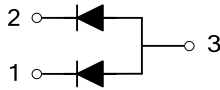
The UTC **BAW56** is a dual surface mount switching diode providing the designers with ultra-fast switching and high conductance.

The UTC **BAW56** is suitable for general purpose switching applications.

FEATURES

- * Ultra-fast switching
- * Low switching loss
- * High Conductance

SYMBOL



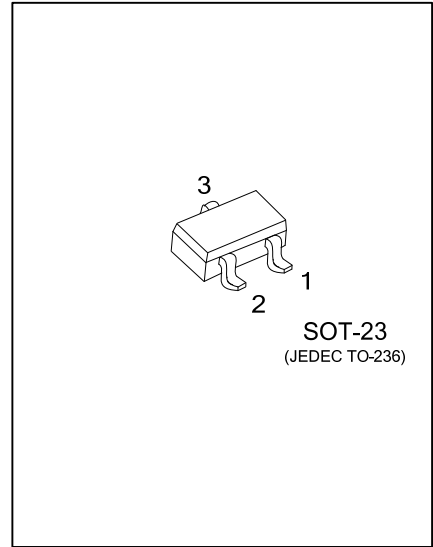
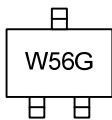
ORDERING INFORMATION

Ordering Number	Package	Pin Assignment			Packing
		1	2	3	
BAW56G-AE3-R	SOT-23	K1	K2	A2A1	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

<p>BAW56G-AE3-R</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p>	<p>(1) R: Tape Reel (2) AE3: SOT-23 (3) G: Halogen Free and Lead Free</p>
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MARKING



■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Repetitive Peak Reverse Voltage	V_{RRM}	75	V
Working Peak Reverse Voltage	V_{RWM}	75	V
DC Blocking Voltage	V_R	75	V
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Forward Continuous Current (Note 2)	I_{FM}	300	mA
Average Rectified Output Current	I_O	150	mA
Non-Repetitive Peak Forward Surge Current	$t=1.0\mu\text{s}$	2.0	A
	$t=1.0\text{s}$	1.0	
Power Dissipation (Note 2)	P_D	350	mW
Junction Temperature	T_J	-65 ~ +150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-65 ~ +150	$^\circ\text{C}$

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient (Note 2)	θ_{JA}	357	$^\circ\text{C/W}$

■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{BR(R)}$	$I_R = 2.5\mu\text{A}$	75			V
Forward Voltage (Note 1, 3)	V_F	$I_F = 1.0\text{mA}$			0.715	V
		$I_F = 10\text{mA}$			0.855	V
		$I_F = 50\text{mA}$			1.0	V
		$I_F = 150\text{mA}$			1.25	V
Peak Reverse Current (Note 1)	I_R	$V_R = 75\text{V}$			2.5	μA
		$V_R = 75\text{V}, T_J = 150^\circ\text{C}$			50	μA
		$V_R = 25\text{V}, T_J = 150^\circ\text{C}$			30	μA
		$V_R = 20\text{V}$			25	nA
Junction Capacitance	C_J	$V_R = 0, f = 1.0\text{MHz}$			2.0	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10\text{mA}, I_{RR} = 0.1 \times I_R, R_L = 100\Omega$			4.0	ns

Notes: 1. Short duration test pulse used to minimize self-heating effect.

2. Part mounted on FR-4 PC board with recommended pad layout.

3. Pulse Test: Pulse Width: $300\mu\text{s}$, Duty Cycle $\leq 2\%$.

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