



BAS299

DIODE

HIGH SPEED DOUBLE DIODES

■ DESCRIPTION

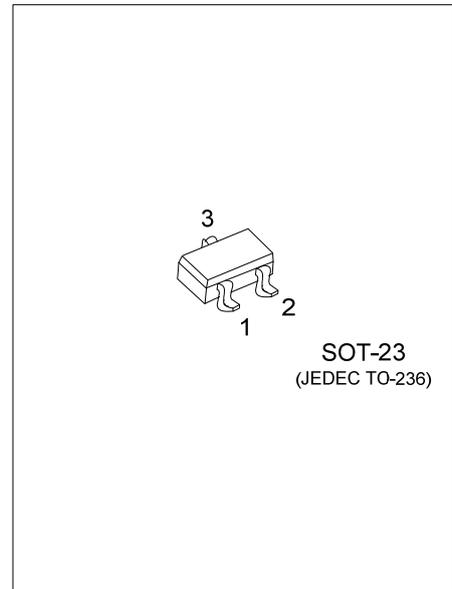
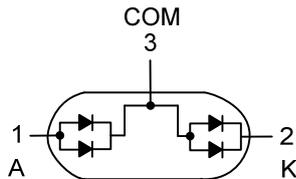
The UTC **BAS299** is schottky barrier diode, it uses UTC's advanced technology to provide customers with low forward voltage, etc.

The UTC **BAS299** is suitable for ultra high-speed switching, protection circuits, voltage clamping and blocking diodes.

■ FEATURES

- * High switching speed: 6ns (max.)
- * Continuous reverse voltage: 100V (max.)
- * Repetitive peak reverse voltage: 100V (max.)
- * Repetitive peak forward current: 900mA (max.)

■ SYMBOL



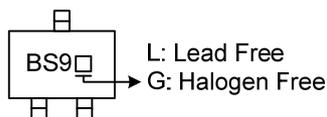
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
BAS299L-AE3-R	BAS299G-AE3-R	SOT-23	A	K	COM	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode COM: Common Connection

<p>BAS299G-AE3-R</p> <ul style="list-style-type: none"> (1) Packing Type (2) Package Type (3) Green Package 	<ul style="list-style-type: none"> (1) R: Tape Reel (2) AE3: SOT-23 (3) G: Halogen Free and Lead Free, L: Lead Free
---	--

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	RATINGS	UNIT	
Repetitive peak reverse voltage	V_{RRM}	100	V	
Continuous Reverse Voltage	V_R	100	V	
Continuous Forward Current (single diode loaded)	I_F	430	mA	
Continuous Forward Current (double diode loaded)		250	mA	
Repetitive peak forward current	I_{FRM}	900	mA	
Non-Repetitive Peak Forward Current @Square Wave, $T_J=125^{\circ}\text{C}$ Prior to Surge	I_{FSM}	$t_p=1\mu\text{s}$	8	A
		$t_p=1\text{ms}$	2	A
		$t_p=1\text{s}$	1	A
Power Dissipation (Note 2)	P_D	250	mW	
Operating Junction Temperature	T_J	+150	$^{\circ}\text{C}$	
Storage Temperature	T_{STG}	-65 ~ +150	$^{\circ}\text{C}$	

Notes: 1. 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.

2. Device mounted on an FR-4 PCB.

■ THERMAL DATA

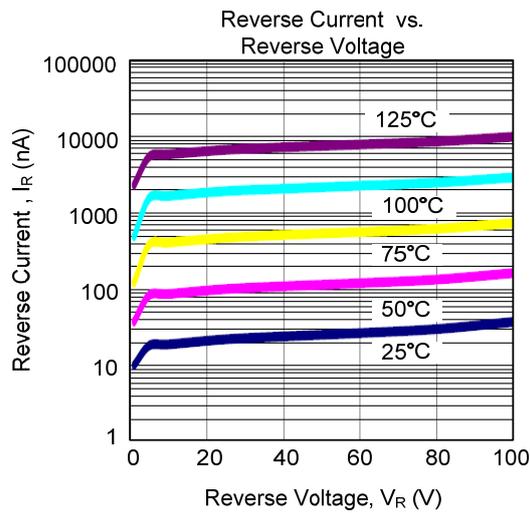
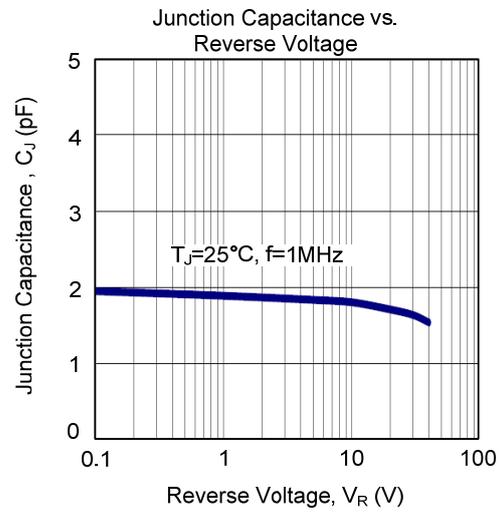
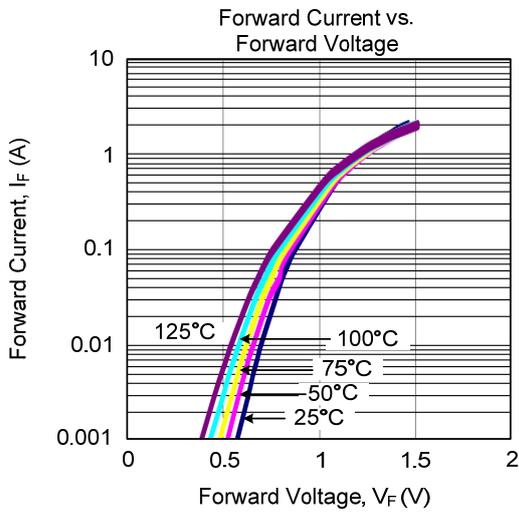
PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	500	$^{\circ}\text{C}/\text{W}$

Note: Device mounted on an FR-4 PCB.

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Forward Voltage	V_F	$I_F=1\text{mA}$			715	mV
		$I_F=10\text{mA}$			855	mV
		$I_F=50\text{mA}$			1	V
		$I_F=150\text{mA}$			1.2	V
		$I_F=300\text{mA}$			1.25	V
Reverse Current (Note)	I_R	$V_R=25\text{V}$			100	nA
		$V_R=100\text{V}$			1	μA
		$V_R=25\text{V}$ ($T_J=150^{\circ}\text{C}$)			30	μA
		$V_R=100\text{V}$ ($T_J=150^{\circ}\text{C}$)			50	μA
Diode Capacitance	C_D	$V_R=0\text{V}$, $f=1\text{MHz}$			3	pF
Reverse recovery time	t_{rr}	When Switched From $I_F=10\text{mA}$ to $I_R=10\text{mA}$, $R_L=100\Omega$, Measured at $I_R=1\text{mA}$			6	ns
Forward recovery voltage	V_{fr}	When Switched From $I_F=10\text{mA}$ $t_f=20\text{ns}$			1.75	V

■ TYPICAL CHARACTERISTICS



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. UTC reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.