



BAS299

DIODE

HIGH SPEED DOUBLE DIODES

DESCRIPTION

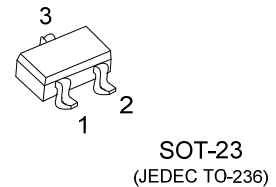
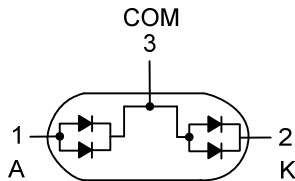
The UTC **BAS299** is schottky barrier diode, it uses UTC's advanced technology to provide customers with low forward voltage, etc.

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



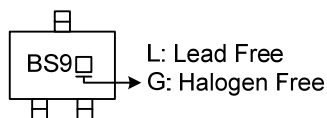
ORDERING INFORMATION

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

	(1)Packing Type	(1) R: Tape Reel
	(2)Package Type	(2) AE3: SOT-23
	(3)Green Package	(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	$t_p=1\mu\text{s}$	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

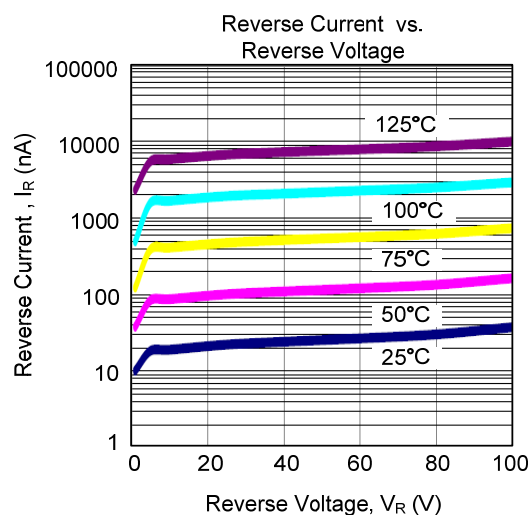
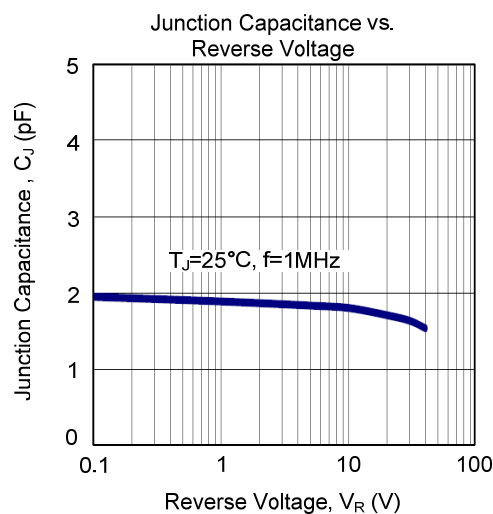
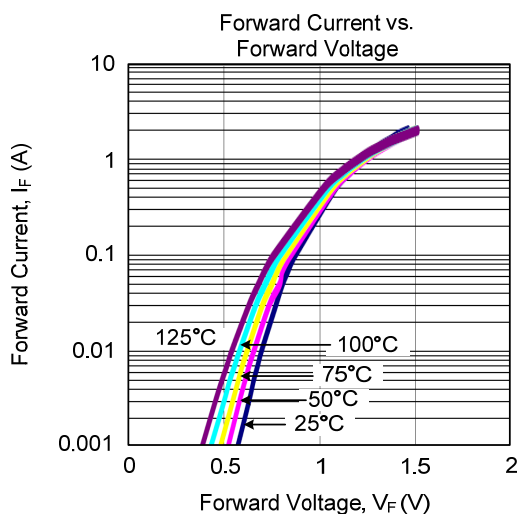
PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	500	$^{\circ}\text{C/W}$

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 $I_F=10\text{mA}$ $t_r=20\text{ns}$			1.75	V

■ TYPICAL CHARACTERISTICS



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