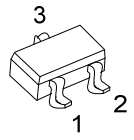
BAS299

DIODE

HIGH SPEED DOUBLE DIODES



SOT-23
(JEDEC TO-236)

■ DESCRIPTION

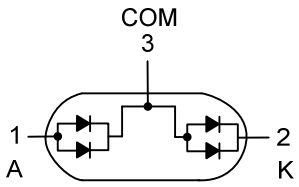
The UTC **BAS299** is schottky barrier diode, it uses UTC's advanced technology to provide customers with low forward voltage, etc.

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.)

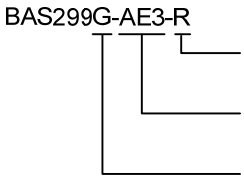
■ SYMBOL



■ 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

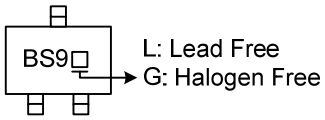


(1) R: Tape Reel

(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°C Prior to Surge	t_p=1μs	I_{FSM}	8	A
	t_p=1ms		2	A
	t_p=1s		1	A
Power Dissipation (Note 2)		P_D	250	mW
Operating Junction Temperature		T_J	+150	°C
Storage Temperature		T_{STG}	-65 ~ +150	°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	°C/W

Note: Device mounted on an FR-4 PCB.

■ ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

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

■ TYPICAL CHARACTERISTICS