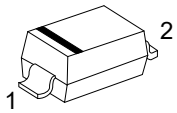
BAS914

DIODE

HIGH-SPEED SWITCHING DIODE



SOD-323

■ DESCRIPTION

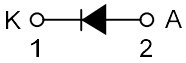
The UTC **BAS914** is high-speed switching diode, it uses UTC's advanced technology to provide customers with high switching speed, etc.

The UTC **BAS914** is suitable for high-speed switching in e.g. surface mounted circuits.

■ FEATURES

* High switching speed

■ SYMBOL



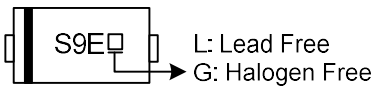
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
BAS914L-CB2-R	BAS914G-CB2-R	SOD-323	K	A	Tape Reel

Note: Pin Assignment: K: Cathode A: Anode

(1) R: Tape Reel
(2) CB2: SOD-323
(3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_A = 25°C, unless otherwise specified.)

PARAMETER			SYMBOL	RATINGS	UNIT
Repetitive Peak Reverse Voltage			V_{RRM}	100	V
Continuous Reverse Voltage			V_R	100	V
Continuous Forward Current			I_F	200	mA
Peak Forward Surge Current			I_{FMS}	500	mA
Non-Repetitive Peak Forward Current	Square Wave, T_A=25°C Prior to urge	t=1μs	I_{FSM}	4	A
		t=1ms		1	A
		t=1s		0.5	A
Total Power Dissipation (Note 2)			P_D	200	mW
Operating Junction Temperature			T_J	-40 ~ +150	°C
Storage Temperature			T_{STG}	-55 ~ +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

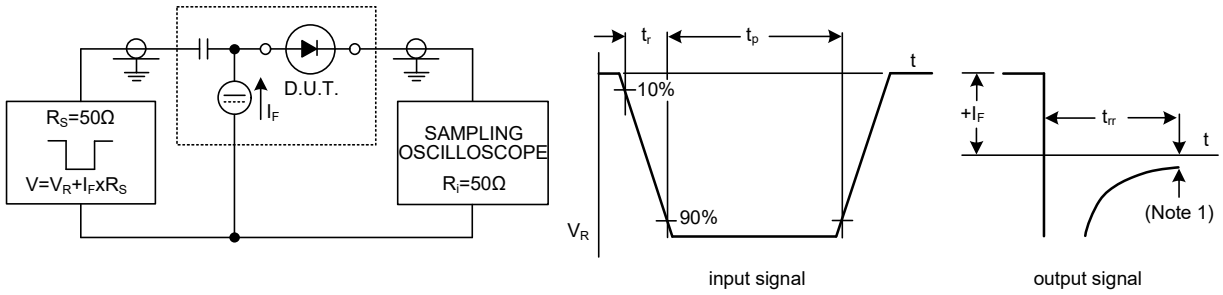
PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	635	°C/W
Junction to Case	θ_{JC}	350	°C/W

Notes: Device mounted on an FR-4 PCB.

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	V_{BR}	IR=100μA	100			V
Forward Voltage	V_F	I_F=10mA			1	V
		I_F=50mA			1	V
Reverse Current	I_R	V_R=20V			25	nA
		V_R=75V			5	μA
Diode Capacitance	C_d	f=1MHz, V_R=0			4	pF
Reverse Recovery Time	t_{rr}	When Switched from I_F=10mA to I_R=10mA, R_L=100Ω, Measured at I_R=1mA, See Fig.1			4	ns

■ TEST CIRCUITS AND WAVEFORMS



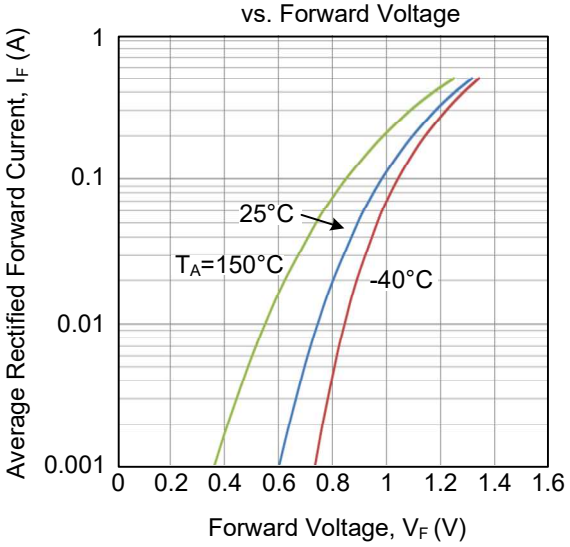
Note 1. I_R=1mA.

Input signal: reverse pulse rise time t_r=0.6ns; reverse voltage pulse duration t_p=100ns; duty factor δ=0.05;
Oscilloscope: rise time t_r=0.35ns.

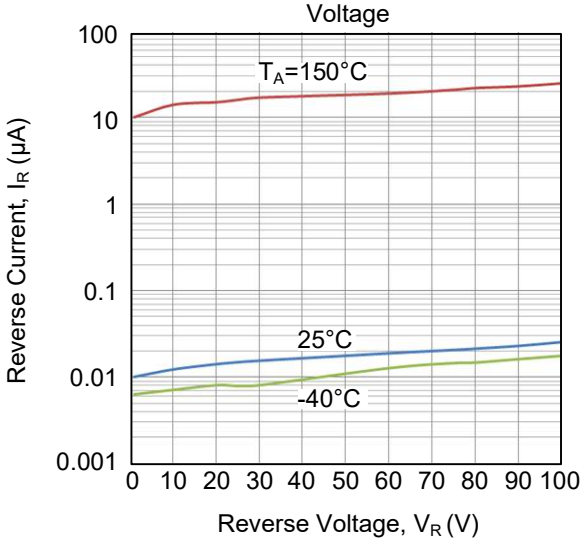
Fig.1 Reverse Recovery Voltage Test Circuit and Waveforms

■ TYPICAL CHARACTERISTICS

Average Rectified Forward Current vs. Forward Voltage



Reverse Current vs. Reverse Voltage



Diode Capacitance vs. Reverse Voltage