



BAS28

DIODE

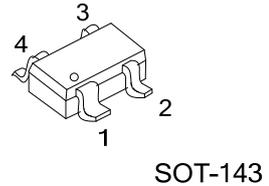
HIGH-SPEED DOUBLE DIODE

DESCRIPTION

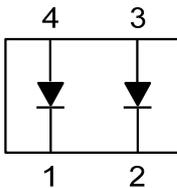
The UTC **BAS28** is two high-speed switching diodes fabricated in planar technology, and encapsulated in a small SOT143B Surface-Mounted Device (SMD) plastic package. The diodes are not connected.

FEATURES

- * High switching speed: $t_{rr} \leq 4\text{ns}$
- * Reverse voltage: $V_R \leq 75\text{V}$
- * Repetitive peak reverse voltage: $V_{RRM} \leq 85\text{V}$
- * Repetitive peak forward current: $I_{FRM} \leq 500\text{mA}$



SYMBOL



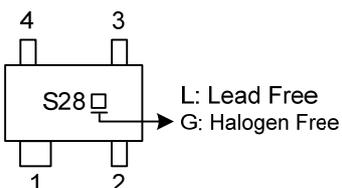
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment				Packing
Lead Free	Halogen Free		1	2	3	4	
BAS28L-AD4-R	BAS28G-AD4-R	SOT-143	K1	K2	A2	A1	Tape Reel

Note: Pin Assignment: K: Cathode A: Anode

<p>BAS28G-AD4-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) AD4: SOT-143 (3) G: Halogen Free and Lead Free, L: Lead Free
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MARKING



■ ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	RATINGS	UNIT	
Repetitive Peak Reverse Voltage	V_{RRM}	85	V	
Continuous Reverse Voltage	V_R	75	V	
Continuous Forward Current (Note 2)	I_F	215	mA	
Repetitive Peak Forward Current	I_{FRM}	500	mA	
Non-Repetitive Peak Forward Current (Note 4)	I_{FSM}	$t=1\mu s$	4	A
		$t=1ms$	1	A
		$t=1s$	0.5	A
Power Dissipation ($T_J=25^\circ C$) (Note 2, 3)	P_D	250	mW	
Junction Temperature	T_J	+150	$^\circ C$	
Storage Temperature	T_{STG}	-65 ~ +150	$^\circ C$	

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 FR4 Printed-Circuit Board (PCB).
3. One diode loaded.
4. $T_J=25^\circ C$ prior to surge.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Thermal Resistance From Junction to Ambient (In free air)	θ_{JA}	500	K/W

Note: Device mounted on an FR4 Printed-Circuit Board (PCB), single-sided copper.

■ ELECTRICAL CHARACTERISTICS ($T_J=25^\circ C$, 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
		$I_F=150mA$			1.25	V
Reverse Current	I_R	$V_R=25V$			30	nA
		$V_R=75V$			1	μA
		$V_R=25V, T_J=150^\circ C$			30	μA
		$V_R=75V, T_J=150^\circ C$			50	μA
Diode Capacitance	C_d	$f=1MHz, V_R=0$			1.5	pF
Reverse Recovery Time	t_{rr}	when switched from $I_F=10mA$ to $I_R=10mA$, $R_L=100\Omega$, measured at $I_R=1mA$			4	ns

■ TEST CIRCUITS AND WAVEFORMS

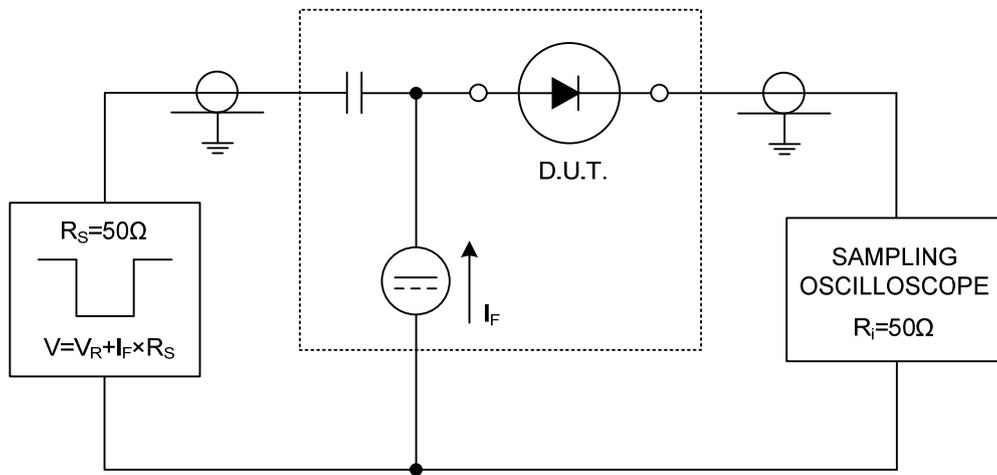


Fig 1. Reverse recovery voltage test circuit

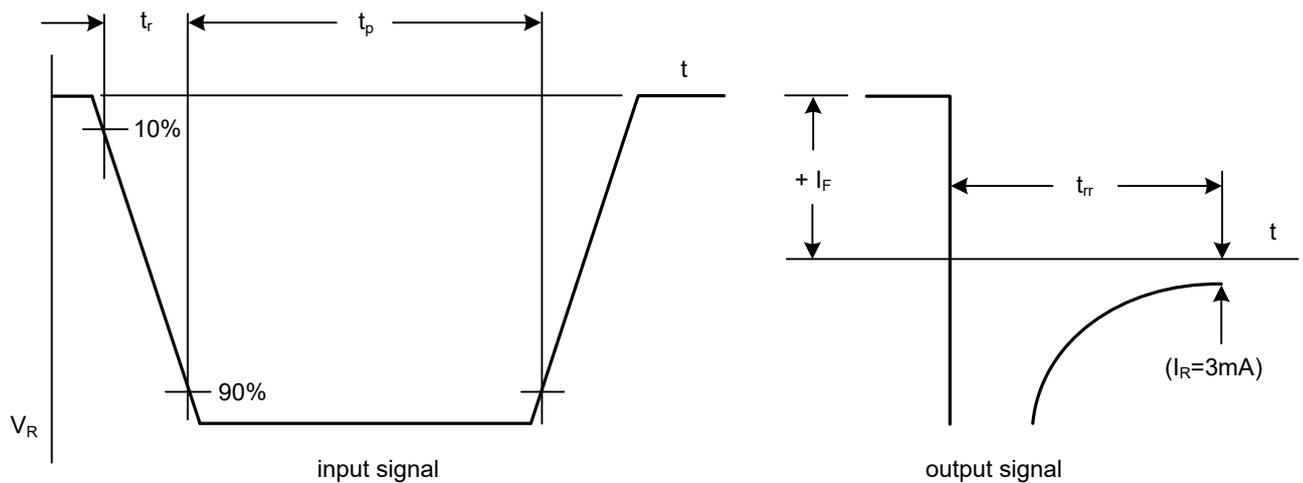


Fig 2. Reverse recovery voltage waveforms

■ TEST CIRCUITS AND WAVEFORMS (Cont.)

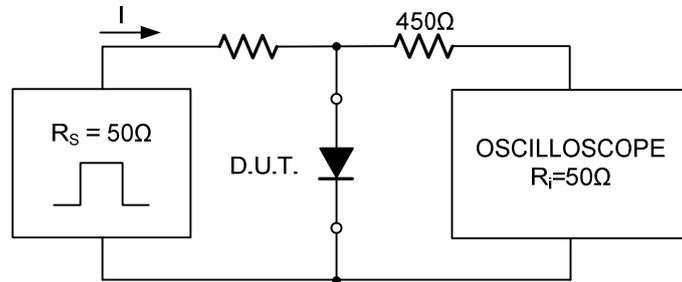


Fig 3. Forward recovery voltage test circuit

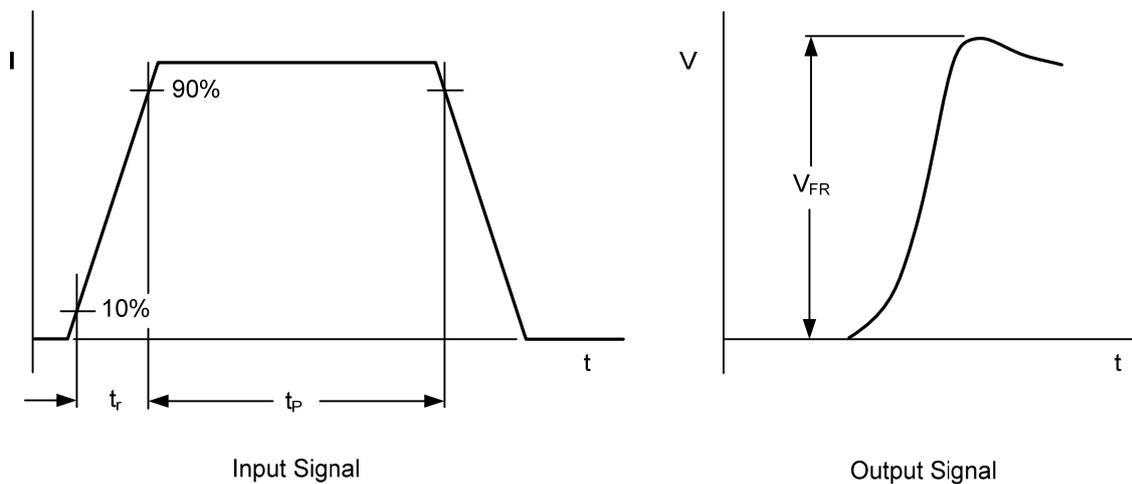


Fig 4. Forward recovery voltage waveforms

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