

## BAS21

## DIODE

### GENERAL PURPOSE DIODES

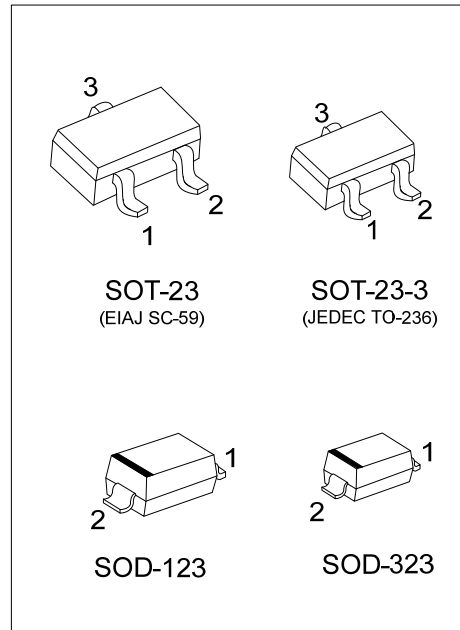
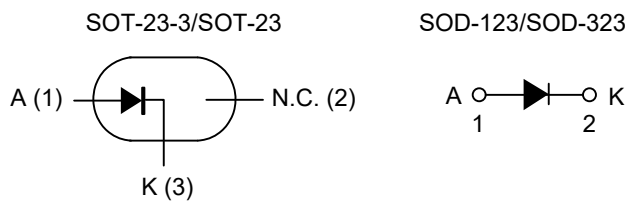
#### DESCRIPTION

The UTC **BAS21** is a general purpose diode using UTC's planar technology to provide customers with high current capacity and high switching speed.

#### FEATURES

- \* High Current Capability
- \* High Switching Speed

#### SYMBOL



#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
BAS21L-AE2-R	BAS21G-AE2-R	SOT-23-3	A	NC	K	Tape Reel
BAS21L-AE3-R	BAS21G-AE3-R	SOT-23	A	NC	K	Tape Reel
BAS21L-CA2-R	BAS21G-CA2-R	SOD-123	A	K	NC	Tape Reel
BAS21L-CB2-R	BAS21G-CB2-R	SOD-323	A	K	NC	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode NC: No Connection

<p>BAS21G-AE2-R</p> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Green Package</p>	<p>(1) R: Tape Reel</p> <p>(2) AE2: SOT-23-3, AE3: SOT-23, CA2: SOD-123 CB2: SOD-323</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p>
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#### MARKING

SOT-23-3 / SOT-23	SOD-323
<p>L: Lead Free G: Halogen Fre</p>	

## ■ ABSOLUTE MAXIMUM RATINGS

PARAMETER		SYMBOL	RATINGS	UNIT
Repetitive Peak Reverse Voltage		$V_{RRM}$	250	V
Continuous Reverse Voltage		$V_R$	200	V
Continuous Forward Current (Note 1)		$I_F$	200	mA
Repetitive Peak Forward Current		$I_{FRM}$	625	mA
Non-Repetitive Peak Forward Current (Square Wave, $T_J=25^\circ\text{C}$ Prior to Surge)	$t=1\mu\text{s}$	$I_{FSM}$	9	A
	$t=100\mu\text{s}$		3	A
	$t=10\text{ms}$		1.7	A
Power Dissipation ( $T_A=25^\circ\text{C}$ ) (Note 1)	SOT-23	$P_D$	250	mW
	SOT-23-3			
	SOD-123		410	mW
	SOD-323			
Junction Temperature		$T_J$	+150	$^\circ\text{C}$
Storage Temperature		$T_{STG}$	-65 ~ +150	$^\circ\text{C}$

Note: 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.

## ■ THERMAL CHARACTERISTICS

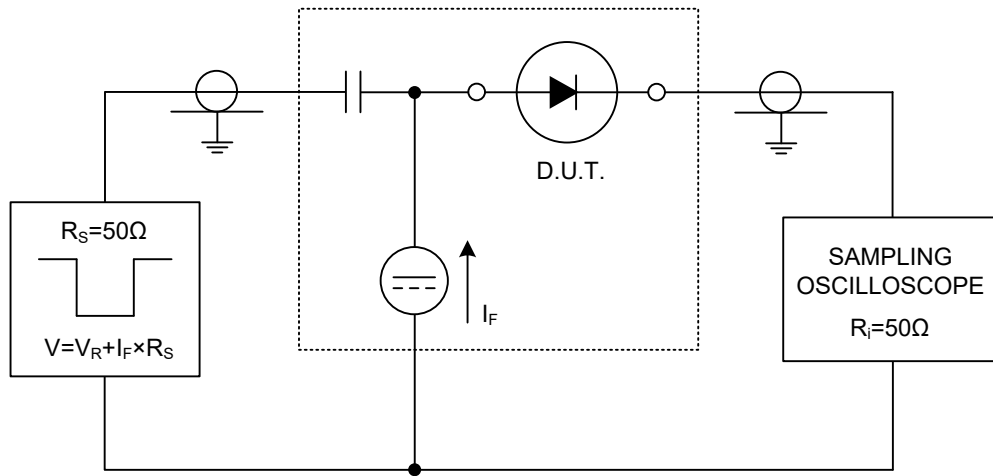
PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient (Note 1)	SOT-23	$\theta_{JA}$	330	K/W
	SOT-23-3			
	SOD-123		200	K/W
	SOD-323			

Note: 1. Device mounted on an FR4 printed-circuit board.

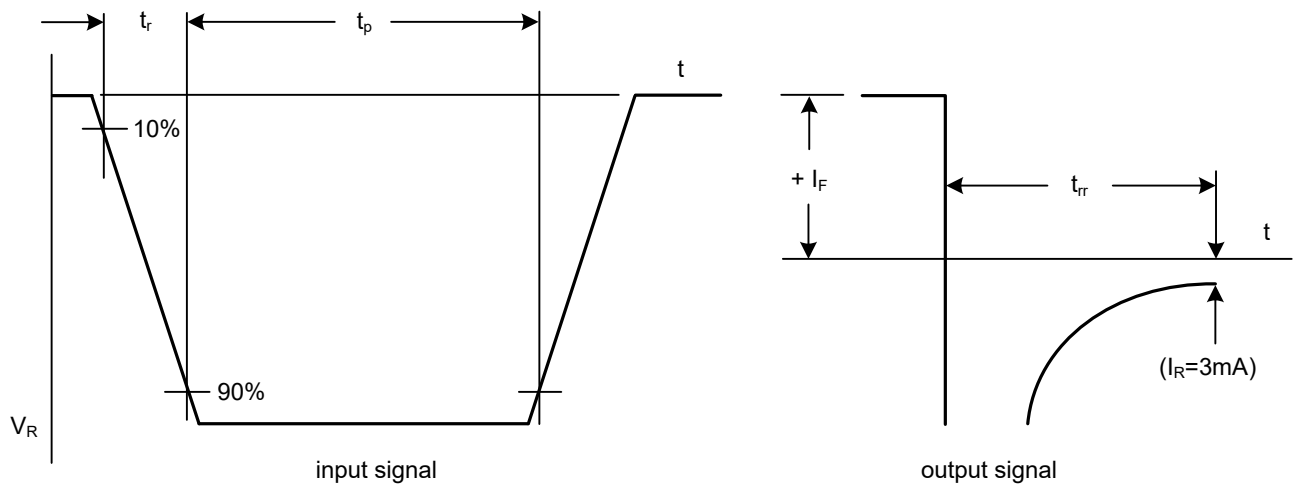
## ■ ELECTRICAL CHARACTERISTICS ( $T_J=25^\circ\text{C}$ , unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Forward Voltage	$V_F$	$I_F=100\text{mA}$			1	V
		$I_F=200\text{mA}$			1.25	V
Reverse Current	$I_R$	$V_R=200\text{V}$			100	nA
		$V_R=200\text{V}, T_J=150^\circ\text{C}$			100	$\mu\text{A}$
Diode Capacitance	$C_D$	$f=1\text{MHz}, V_R=0$			5	pF
Reverse Recovery Time	$t_{RR}$	when switched from $I_F=30\text{mA}$ to $I_R=30\text{mA}$ , $R_L=100\Omega$ , measured at $I_R=3\text{mA}$			50	ns

■ TEST CIRCUITS AND WAVEFORMS



Reverse recovery voltage test circuit



Reverse recovery voltage waveforms

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