

**BAS21**

Preliminary

DIODE**GENERAL PURPOSE DIODES**

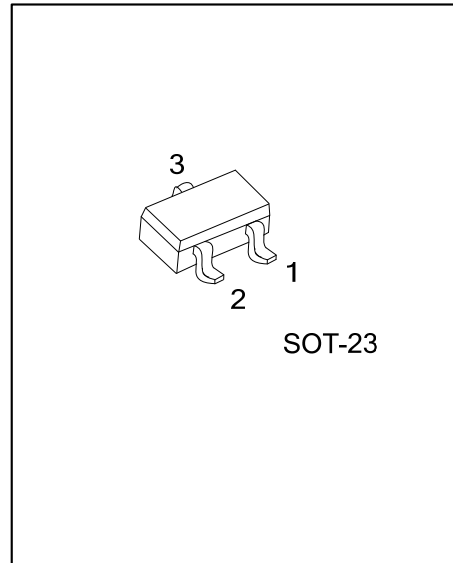
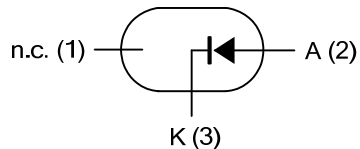
■ DESCRIPTION

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



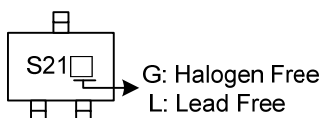
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
BAS21L-AE3-R	BAS21G-AE3-R	SOT-23	x	A	K	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode x: NC

BAS21L-AE3-R (1) Packing Type (2) Package Type (3) Lead Free	(1) R: Tape Reel (2) AE3: SOT-23 (3) G: Halogen Free, L: Lead Free
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■ MARKING



■ 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 °C Prior to Surge)	t=1μs	I _{FSM}	9	A
	t=100μs		3	A
	t=10ms		1.7	A
Power Dissipation (T _A =25°C) (Note 1)		P _D	250	mW
Junction Temperature		T _J	150	°C
Storage Temperature		T _{STG}	-65~+150	°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

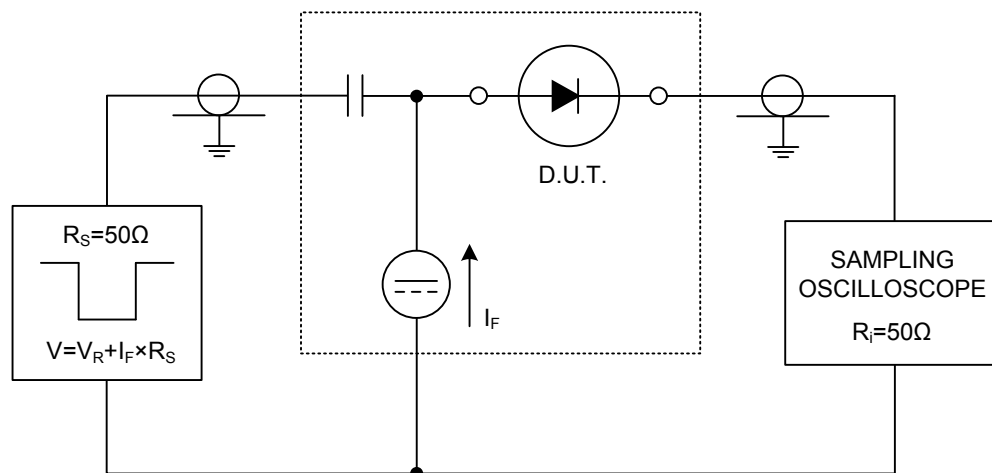
PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient (Note 1)	θ_{JA}	330	K/W

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

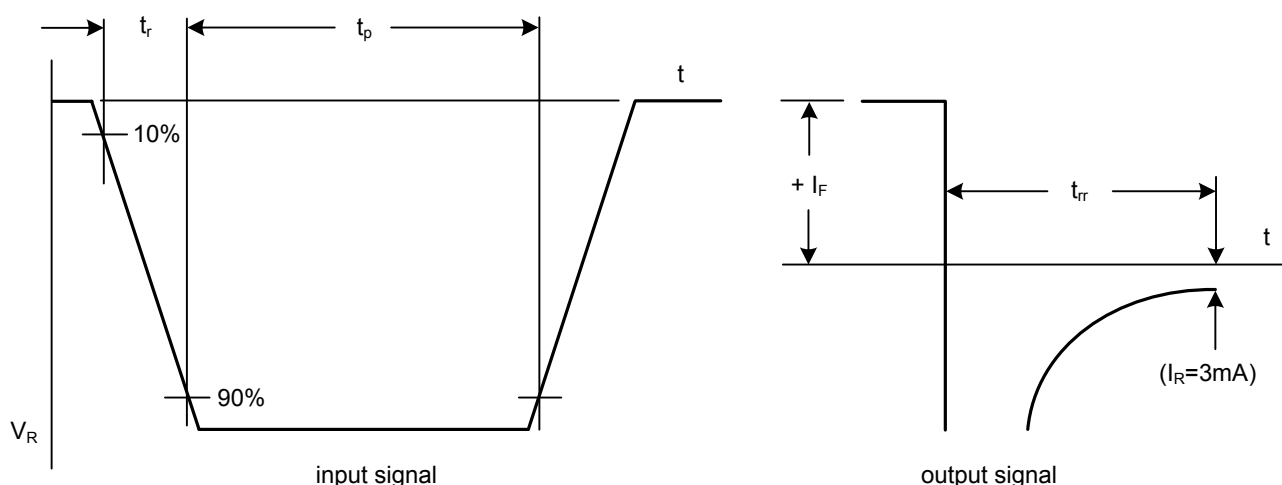
■ ELECTRICAL CHARACTERISTICS ($T_J=25^\circ\text{C}$, unless otherwise specified.)

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	μA
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 WAVEFOMS



Reverse recovery voltage test circuit



Reverse recovery voltage waveforms

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