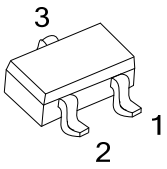
GENERAL PURPOSE DIODES



SOT-23

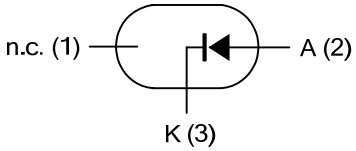
■ DESCRIPTION

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

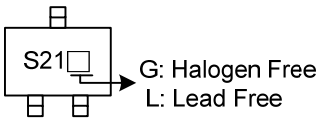
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
BAS21L-AE3-R	BAS21G-AE3-R	SOT-23	x	A	K	Tape Reel

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

BAS21L-AE3-R

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

■ 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

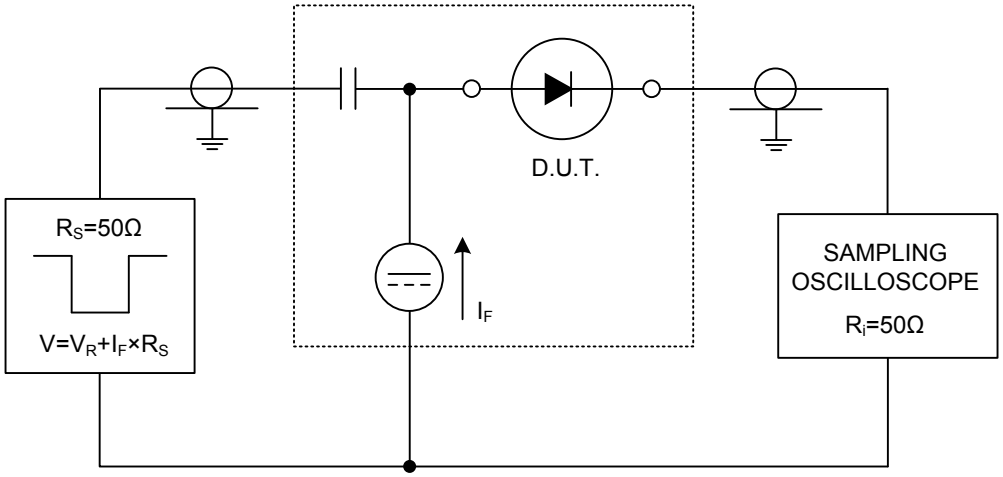
PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient (Note 1)	θ_{JA}	330	K/W

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

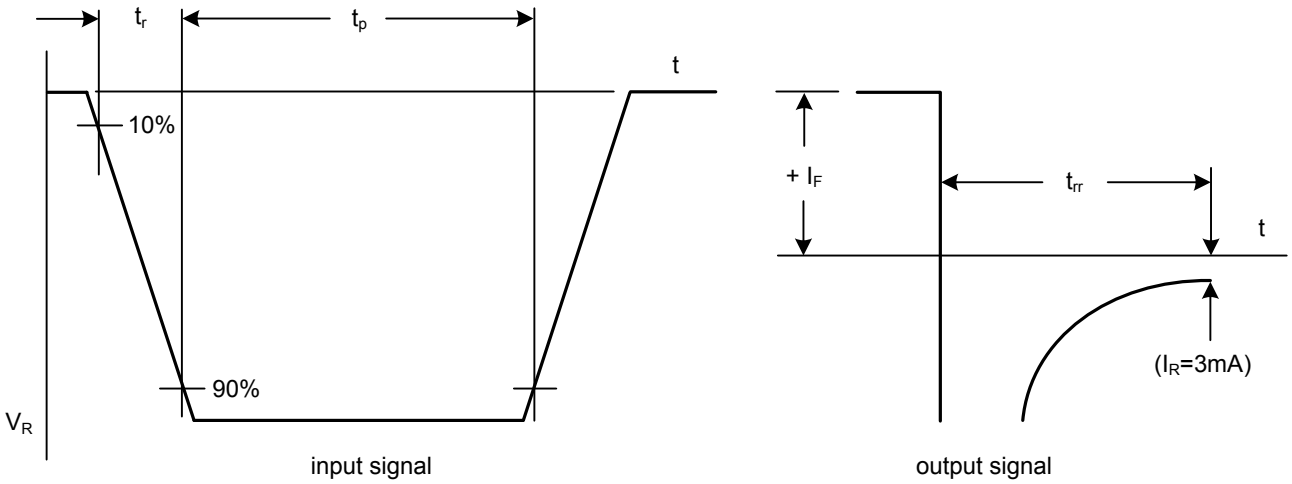
■ ELECTRICAL CHARACTERISTICS (T_J=25°C, unless otherwise specified.)

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

■ TEST CIRCUITS AND WAVEFOMS



Reverse recovery voltage test circuit



input signal output signal

Reverse recovery voltage waveforms