

Features

- Low Leakage Current
- Fast Switching Speed
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Thermal Resistance(Note2): 833°C/W Junction to Ambient (Note 2)

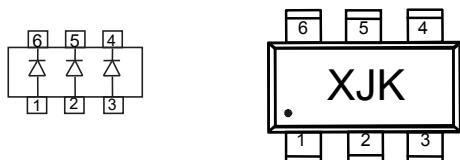
MCC Part Number	Repetitive Peak Reverse Voltage V_{RRM}	RMS Reverse Voltage $V_{R(RMS)}$	DC Blocking Voltage V_R
BAS21TWS	250V	177V	250V

Maximum Ratings @ 25°C Unless Otherwise Specified

Forward DC Current	I_{FM}	200mA	$T_A=25^\circ\text{C}$ (Note 2)
Non-Repetitive Peak Forward Surge Current	I_{FSM}	3A 2A	@ $t=8.3\text{ms}$ @ $t=10\text{ms}$
Power Dissipation	P_{TOT}	150mW	$T_A=25^\circ\text{C}$

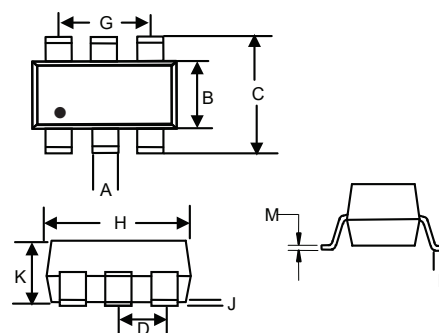
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. Part mounted on FR-4 board with recommended pad layout.

Internal Structure and Marking Code



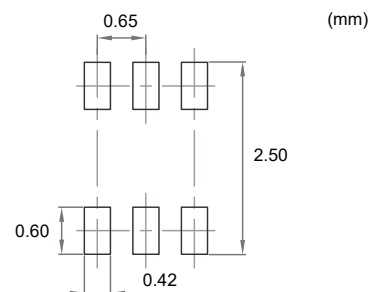
150mW 250Volt Switching Diode

SOT-363S



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.006	0.014	0.15	0.35	
B	0.045	0.053	1.15	1.35	
C	0.079	0.087	2.00	2.20	
D	0.026		0.65		TYP.
G	0.047	0.055	1.20	1.40	
H	0.071	0.087	1.80	2.20	
J	-----	0.004	-----	0.10	
K	0.031	0.043	0.80	1.10	
L	0.008	0.016	0.20	0.40	
M	0.003	0.006	0.08	0.15	

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Breakdown Voltage	V_{BR}	$I_R=100\mu A$	250			V
Forward Voltage	V_F	$I_F=100mA$			1.05	V
		$I_F=200mA$			1.25	V
Reverse Current	I_R	$V_R=200V$			100	nA
		$V_R=200V, T_J=150^\circ C$			100	μA
Junction Capacitance	C_J	$V_R = 0V, f = 1MHz$			5	pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=10mA,$ $I_{rr}=0.1 \times I_R, R_L=100\Omega$			50	ns

Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

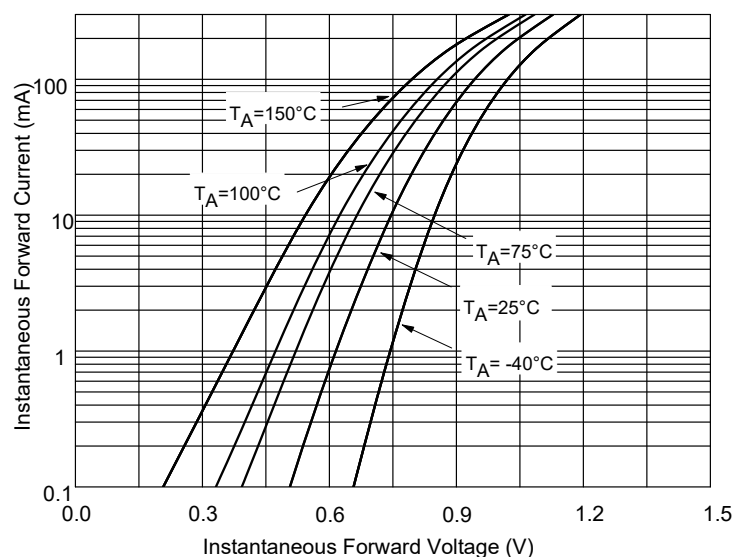


Fig. 2 - Typical Reverse Leakage Characteristics

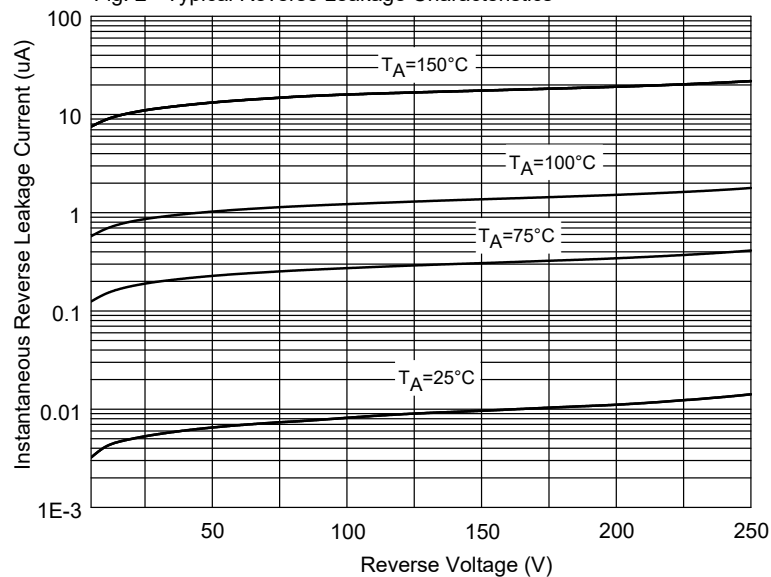


Fig. 3 - Capacitance Characteristics

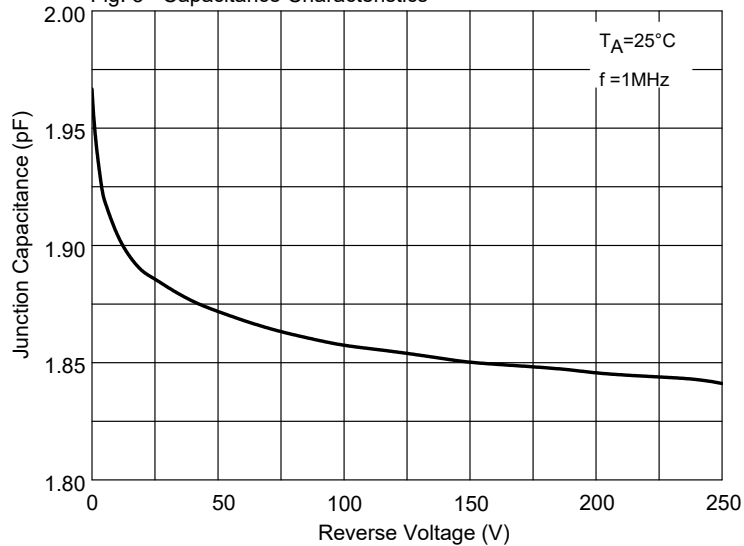
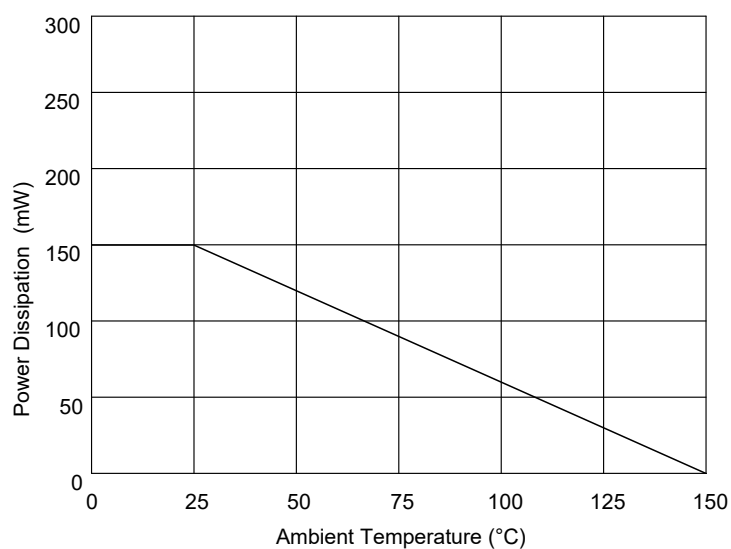


Fig. 4 - Power Derating Curve



Ordering Information

Device	Packing
BAS21TWS-TP	Tape&Reel: 3Kpcs/Reel

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