

**Features**

- Ideally Suited For Automatic Insertion
- Fast Switching Speed
- Epitaxial Planar Die Construction
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

**Mechanical Data**

- Weight: 0.008 Grams ( Approx.)

**Maximum Ratings**

- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Thermal Resistance(3):357°C/W Junction to Ambient

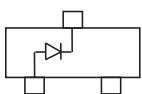
MCC Part Number	Device Marking	Repetitive Peak Reverse Voltage $V_{RRM}$	Continuous Reverse Voltage $V_R$
BAS19	JP	120V	100V
BAS20	JR	200V	150V
BAS21	JS	250V	200V

Average Rectified Forward Current	$I_{F(AV)}$	200mA	(Note 1)
Forward DC Current	$I_F$	200mA	$T_A=25^\circ\text{C}$ (Note 2)
Non-repetitive Peak Forward Surge Current	$I_{FSM}$	2.5A 0.5A	@ $t=1\mu\text{s}$ @ $t=1\text{s}$
Repetitive Peak Forward Current	$I_{FRM}$	625mA	
Power Dissipation	$P_{TOT}$	350mW	$T_A=25^\circ\text{C}$

Notes:

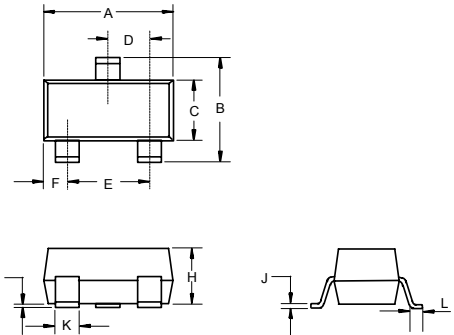
- (1) Measured under Pulse Conditions: Pulse Time:  $t_p \leq 0.3\text{ms}$ .
- (2) Device on Fiberglass Substrate, See Layout on Next Page.
- (3) Mounted on FR-4 Board with Recommended Pad Layout.

**Internal Structure**



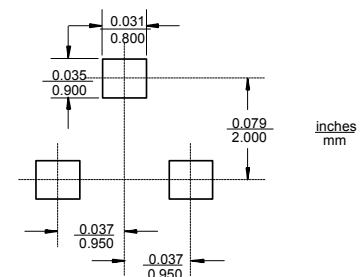
**350mW  
Small  
Signal Diodes**

**SOT-23**



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.110	0.120	2.80	3.04	
B	0.083	0.104	2.10	2.64	
C	0.047	0.055	1.20	1.40	
D	0.034	0.041	0.85	1.05	
E	0.067	0.083	1.70	2.10	
F	0.018	0.024	0.45	0.60	
G	0.0004	0.006	0.01	0.15	
H	0.035	0.043	0.90	1.10	
J	0.003	0.007	0.08	0.18	
K	0.014	0.020	0.35	0.51	
L	0.007	0.020	0.20	0.50	

**Suggested Solder Pad Layout**



**Electrical Characteristics @ 25°C (Unless Otherwise Specified)**

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Forward Voltage	$V_F$	$I_F=100\text{mA}$			1	V
		$I_F=200\text{mA}$			1.25	V
Reverse Current	$I_R$	$V_R=V_{Rmax}$			100	nA
		$V_R=V_{Rmax}, T_J=150^\circ\text{C}$			100	$\mu\text{A}$
Dynamic Forward Resistance	$r_f$	$I_F=100\text{mA}$		5		$\Omega$
Junction Capacitance	$C_J$	$V_R = 0\text{V}, f = 1\text{MHz}$			5	pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=30\text{mA},$ $I_{rr}=0.1 \times I_R, R_L=100\Omega$			50	ns

## Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

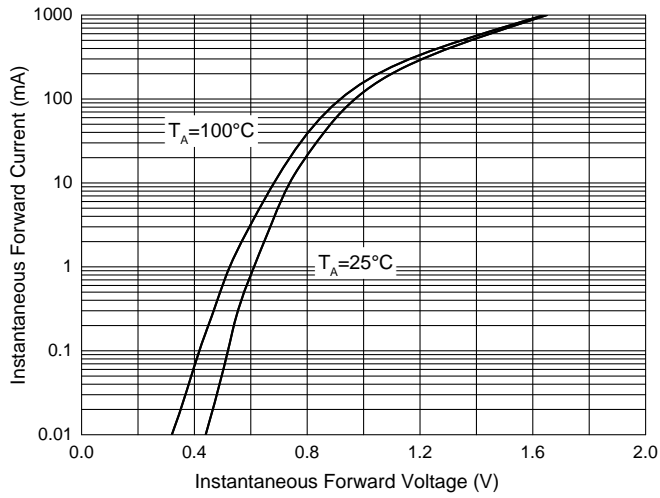


Fig. 2 - Typical Reverse Leakage Characteristics

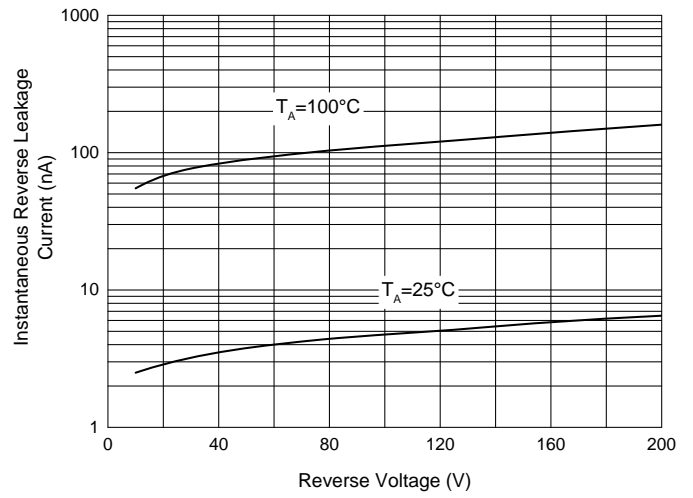
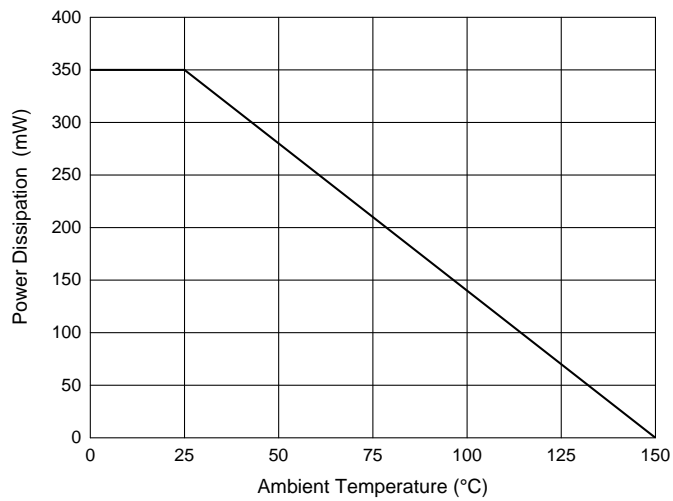


Fig. 3 - Power Derating Curve



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
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