

**Maximum Ratings** (@T<sub>A</sub> = 25°C, unless otherwise specified.)

Characteristic	Symbol	BAS19	BAS20	BAS21	Unit
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	120	200	250	V
Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RWM</sub> V <sub>R</sub>	100	150	200	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	71	106	141	V
Forward Continuous Current (Note 6)	I <sub>FM</sub>	400			mA
Average Rectified Output Current (Note 6)	I <sub>O</sub>	200			mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0μs @ t = 1.0s	I <sub>FSM</sub>	2.5 0.5			A
Repetitive Peak Forward Surge Current (Note 6)	I <sub>FRM</sub>	625			mA

**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 6)	P <sub>D</sub>	250	mW
Thermal Resistance Junction to Ambient Air (Note 6)	R <sub>θJA</sub>	500	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	°C

**Electrical Characteristics** (@T<sub>A</sub> = 25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 7) BAS19 BAS20 BAS21	V <sub>(BR)R</sub>	120 200 250	—	V	I <sub>R</sub> = 100μA
Forward Voltage	V <sub>F</sub>	—	1.0 1.25	V	I <sub>F</sub> = 100mA I <sub>F</sub> = 200mA
Reverse Current @ Rated DC Blocking Voltage (Note 7)	I <sub>R</sub>	—	100 15	nA μA	T <sub>J</sub> = 25°C T <sub>J</sub> = 100°C
Total Capacitance	C <sub>T</sub>	—	5.0	pF	V <sub>R</sub> = 0, f = 1.0MHz
Reverse Recovery Time	t <sub>rr</sub>	—	50	ns	I <sub>F</sub> = I <sub>R</sub> = 30mA, I <sub>rr</sub> = 0.1 x I <sub>R</sub> , R <sub>L</sub> = 100Ω

Notes: 6. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com>. I<sub>FM</sub>, I<sub>O</sub> are valid provided that terminals are kept at ambient temperature.  
7. Short duration pulse test used to minimize self-heating effect.

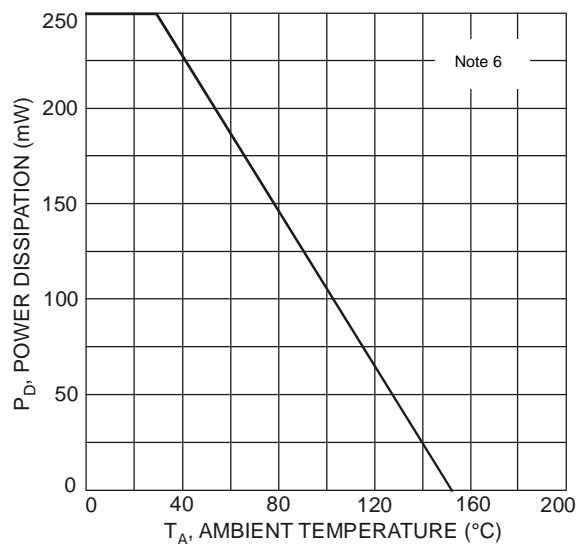


Fig. 1 Power Derating Curve

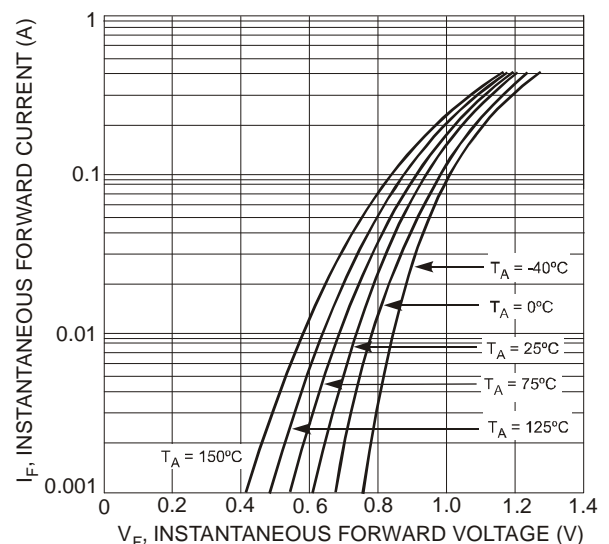


Fig. 2 Typical Forward Characteristics

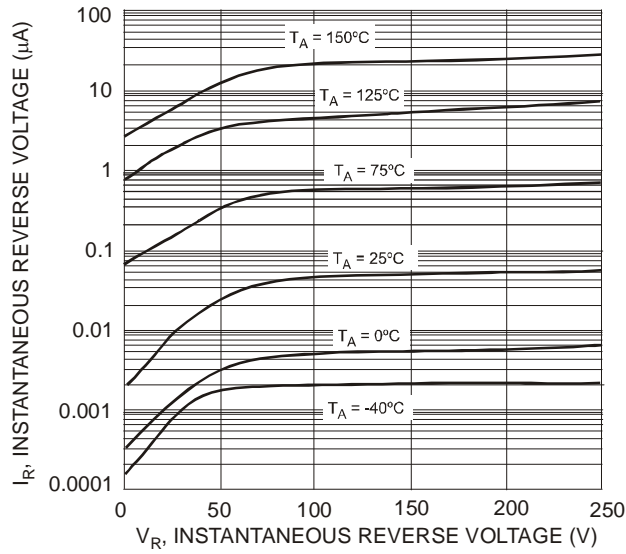


Fig. 3 Typical Reverse Characteristics

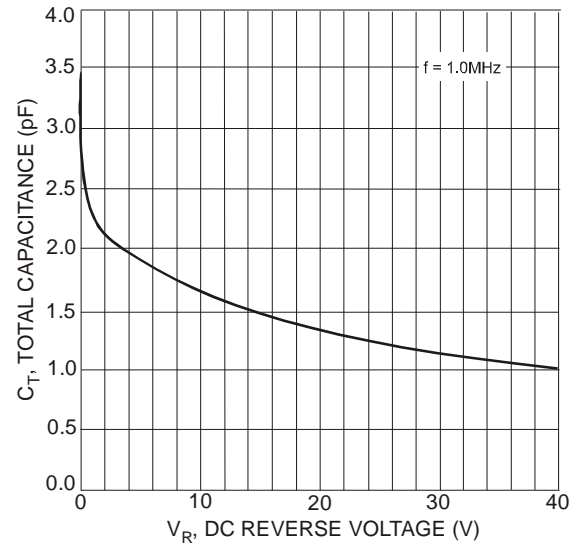
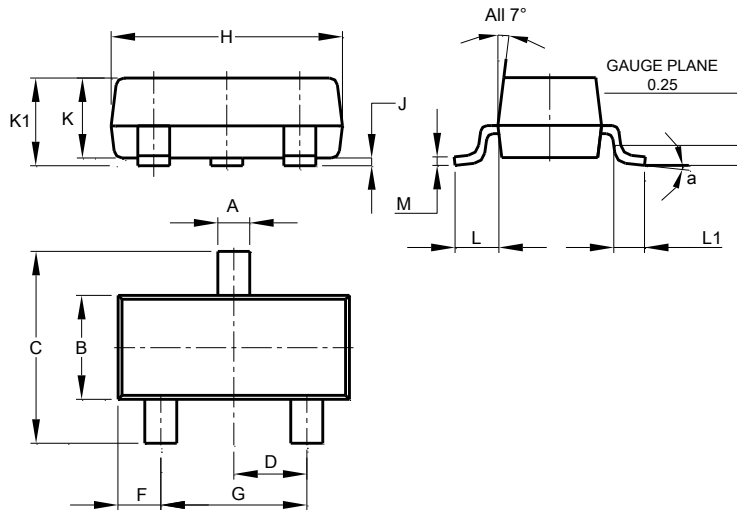


Fig. 4 Total Capacitance vs. Reverse Voltage

## Package Outline Dimensions

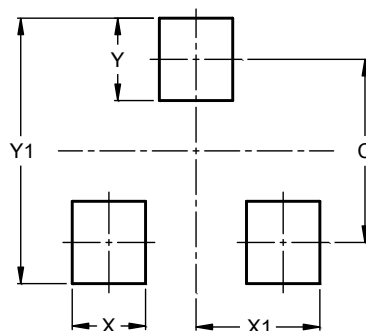
Please see <http://www.diodes.com/package-outlines.html> for the latest version.



SOT23			
Dim	Min	Max	Typ
A	0.37	0.51	0.40
B	1.20	1.40	1.30
C	2.30	2.50	2.40
D	0.89	1.03	0.915
F	0.45	0.60	0.535
G	1.78	2.05	1.83
H	2.80	3.00	2.90
J	0.013	0.10	0.05
K	0.890	1.00	0.975
K1	0.903	1.10	1.025
L	0.45	0.61	0.55
L1	0.25	0.55	0.40
M	0.085	0.150	0.110
a	0°	8°	--
All Dimensions in mm			

## Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.



Dimensions	Value (in mm)
C	2.0
X	0.8
X1	1.35
Y	0.9
Y1	2.9

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