

### Surface Mount Switching Diodes

 Lead(Pb)-Free

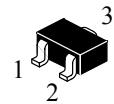
#### Features:

- \* Ultra-Small Surface Mount Package
- \* Fast switching Speed
- \* For General Purpose Switching Applications
- \* High Conductance

#### Mechanical Data:

- \* Terminals: Solderable per MIL-STD-202, Method 208
- \* Polarity: See Diagrams Page.2
- \* Marking: See Diagrams Page.2
- \* Weight: 0.002 grams (approx)

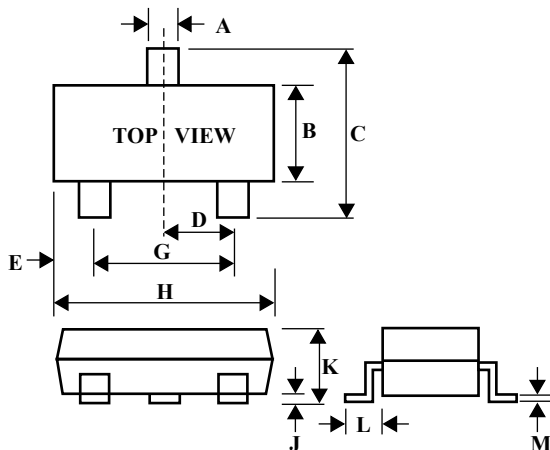
**SWITCHING DIODES**  
**150 mAMPERES**  
**75 VOLTS**



**SOT-523(SC-75)**

### SOT-523 Outline Dimensions (SC-75)

Unit:mm



SC-75		
Dim	Min	Max
A	0.30	0.50
B	0.70	0.90
C	1.45	1.75
D	-	0.50
E	0.15	0.40
G	0.80	1.00
H	1.40	1.80
J	0.00	0.10
K	0.70	1.00
L	0.37	0.48
M	0.10	0.25


## Maximum Ratings (T<sub>A</sub>=25°C Unless otherwise noted)

Characteristic	Symbol	Value	Unit
Non-Repetitive Peak reverse voltage	V <sub>RM</sub>	100	V
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	75	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>R</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	53	V
Forward Continuous Current	I <sub>FM</sub>	300	mA
Average Rectified Output Current	I <sub>O</sub>	150	mA
Peak Forward Surge Current @t=1.0μS	I <sub>FSM</sub>	2.0	A
@t=1.0S		1.0	
Power Dissipation	P <sub>d</sub>	200	mW
Thermal Resistance	R <sub>θJA</sub>	625	°C/W
Junction temperature	T <sub>j</sub>	150	°C
Storage Temperature Range	T <sub>STG</sub>	-65 to + 150	°C

## Electrical Characteristics (T<sub>A</sub>=25°C Unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
Reverse Breakdown Voltage I <sub>R</sub> =1μA	V <sub>(BR)R</sub>	75	-	V
Forward Voltage I <sub>F</sub> =1.0mA I <sub>F</sub> =10mA I <sub>F</sub> =50mA I <sub>F</sub> =150mA	V <sub>F</sub>	-	715 855 1000 1250	mV
Total Capacitance V <sub>R</sub> =0V, f=1.0MHz	C <sub>T</sub>	-	2	Pf
Reverse Current V <sub>R</sub> =75V V <sub>R</sub> =20V	I <sub>R</sub>	-	1.0 0.025	μA
Reverse Recover Time I <sub>F</sub> =I <sub>R</sub> =10mA, I <sub>rr</sub> =0.1 x I <sub>R</sub> , R <sub>L</sub> =100Ω	T <sub>rr</sub>	-	4.0	nS

## Device Marking

Item	Marking	Equivalent Circuit diagram
BAS16T	A2	

## Typical Characteristics

## BAS16T

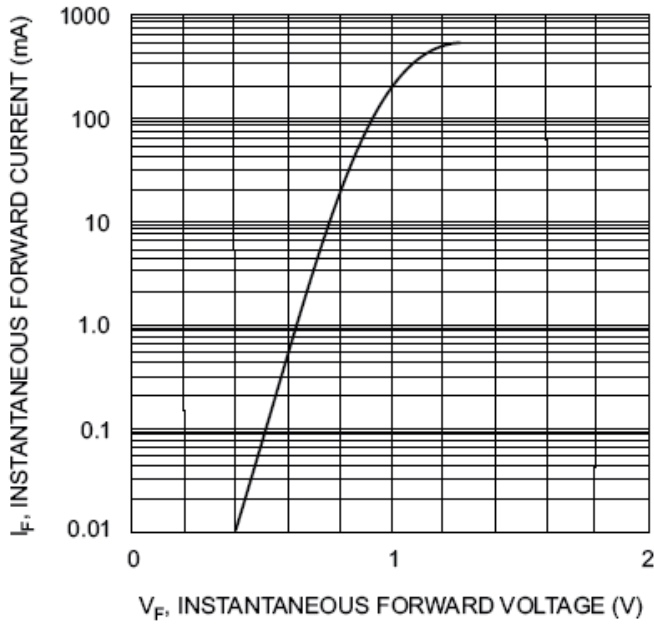


Fig. 1 Forward Characteristics

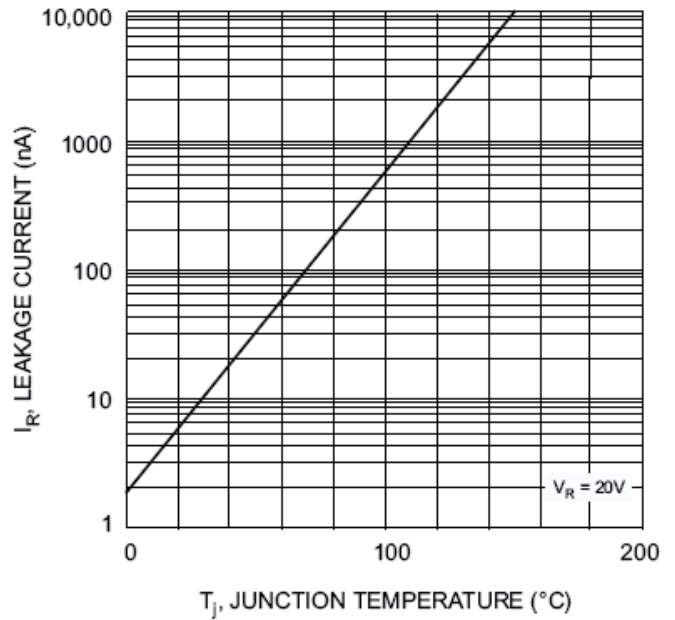


Fig. 2 Leakage Current vs Junction Temperature