

Surface Mount Schottky Barrier Diodes

(Pb) Lead(Pb)-Free

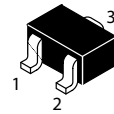
Features:

- *Extremely Fast Switching Speed
- *Low Forward Voltage
- *Very Small Conduction Losses
- *Schottky Barrier Diodes Encapsulated in a SOT-323 Package

Description:

These schottky barrier diodes are designed for high speed switching applications circuit protection, and voltage clamping, Extremely low forward voltage reduces conduction loss, Miniature surface mount package is excellent for hand held and portable applications where space is limited.

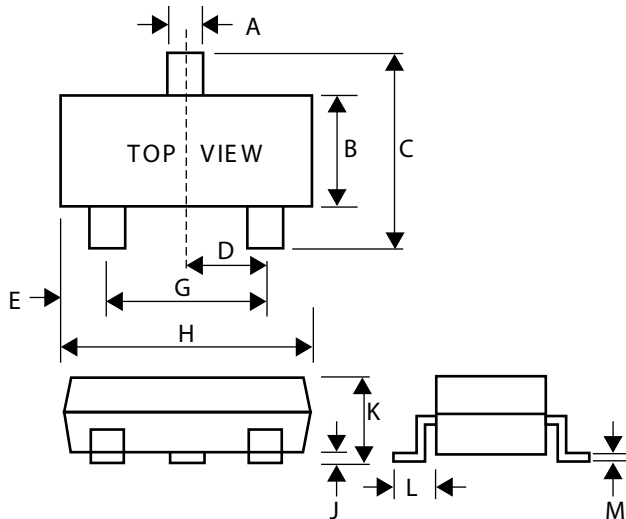
**SMALL SIGNAL
 SCHOTTKY DIODES**
70m AMPERES
70 VOLTS



SOT-323(SC-70)

SOT-323 Outline Dimensions

Unit:mm



SOT-323		
Dim	Min	Max
A	0.30	0.40
B	1.15	1.35
C	2.00	2.40
D	-	0.65
E	0.30	0.40
G	1.20	1.40
H	1.80	2.20
J	0.00	0.10
K	0.80	1.00
L	0.42	0.53
M	0.10	0.25





Maximum Ratings ($T_A=25^{\circ}\text{C}$ Unless otherwise noted)

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	VRRM VRRM VR	70	V
RMS Reverse Voltage	VR(RMS)	49	V
Forward Continuous Current ⁽¹⁾	VR	70	mA
Non-Repetitive Peak Forward Surge Current @ $t_p < 1.0\text{s}$	IFSM	100	mA
Power Dissipation ⁽¹⁾	Pd	200	mA
Thermal Resistance Junction to Ambient Air	RθJA	625	KM
Operating Junction Temperature Range	Tj	-55 to + 150	°C
Storage Temperature Range	TSTG	-65 to + 150	°C

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ Unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
Reverse Breakdown Voltage ($I_R=10\mu\text{A}$)	V(BR)R	70		Volts
Forward Voltage $I_F=1.0\text{mA}$ $I_F=15\text{mA}$	VF		0.41 1.00	Volts
Total Capacitance ($V_R=0\text{V}$, $f=1.0\text{MHz}$)	CT		2	Pf
Reverse Leakage $V_R=50\text{V}$	IR		0.1	uAdc
Reverse Recover Time $I_F=I_R=10\text{mA}$, $I_R(\text{Rec})=1.0\text{mA}$	Trr		5.0	nS

Device Marking

Item	Marking	Equivalent Circuit diagram
BAS70W	K73	
BAS70W-05	K75	
BAS70W-06	K76	
BAS70W-04	K74	

Note: 1. Valid provided that terminals are kept at ambient temperature.

2. Test period < 300us.

Electrical Characteristic curves(Ta=25°C)

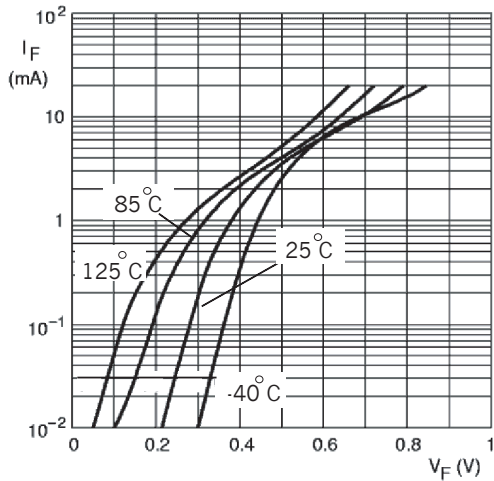


FIG1 Forward current as function of forward voltage; typical values.

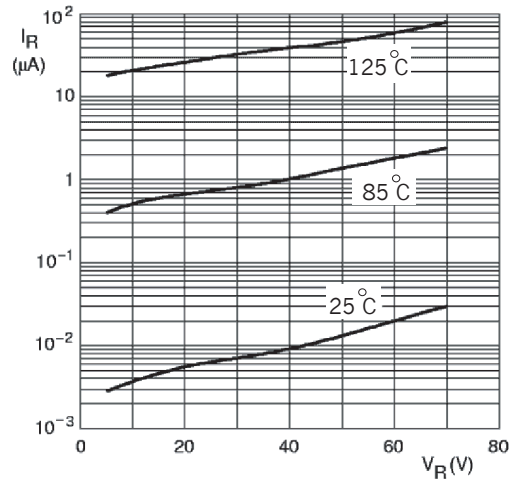


FIG2 Reverse current as a function of reverse voltage; typical values.

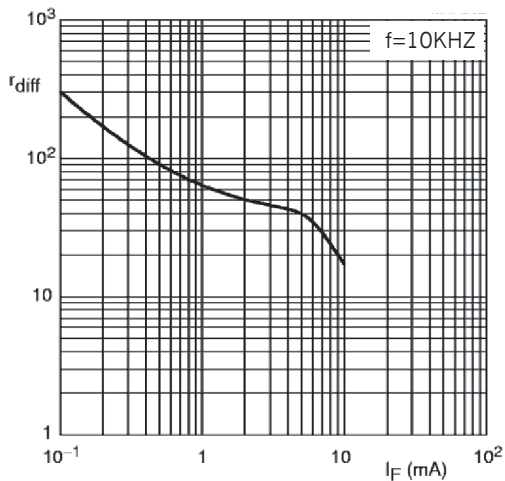


FIG3 Differential forward resistance as a function of forward current; typical values.

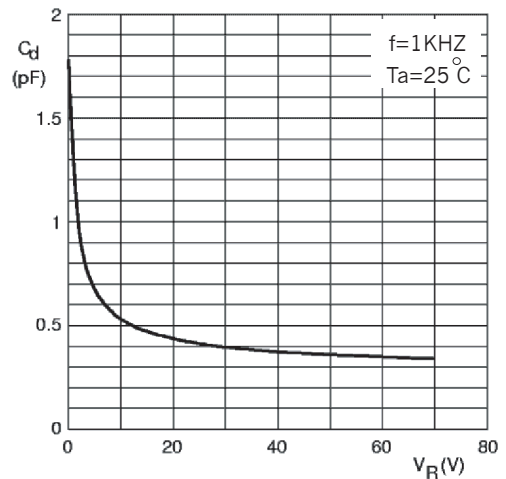


FIG4 Diode capacitance as a function of reverse voltage; typical values.