



# BAS316

## High Speed Switching Diode 400mW

### Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Surface Mount Package Ideally Suited for Automatic Insertion
- High switching speed: max. 4ns
- Continuous reverse voltage: max. 100V
- Repetitive peak reverse voltage: max. 100V
- Repetitive peak forward current: max. 500mA
- Halogen free available upon request by adding suffix "-HF"

### Mechanical Data

- Marking: A6
- Polarity: Indicated by Cathode Band

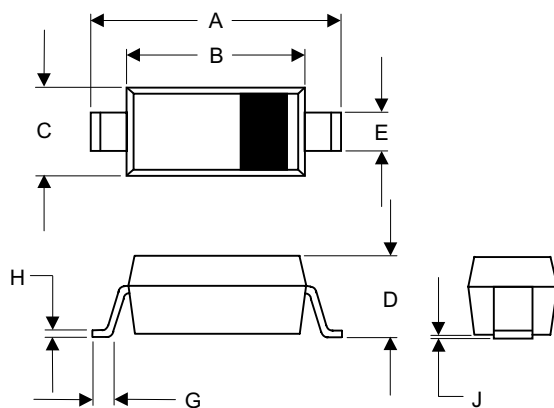
Maximum Ratings @ 25°C Unless Otherwise Specified

Parameter	Symbol	Limits	Unit
DC Reverse Voltage	$V_R$	100	V
Forward Current	$I_F$	250	mA
Total Device Dissipation	$P_D$	400	mW
Junction and Storage temperature	$T_j, P_{stg}$	-65~+150	°C
Non-repetitive peak forward current	$I_{FSM}$	4	A
$t=1\mu s$		1	
$t=1ms$		0.5	

### Electrical Characteristics @ 25°C Unless Otherwise Specified

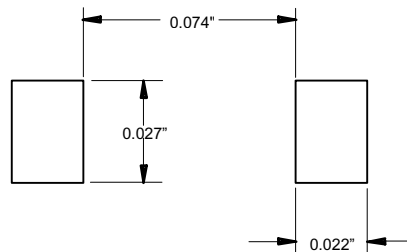
Parameter	Symbol	Test Conditions	MIN	MAX	UNIT
Reverse breakdown voltage	$V_{BR}$	$I_R=100\mu A$	100	...	V
Forward voltage	$V_F$	$I_F=1mA$	...	715	mV
		$I_F=10mA$	...	855	
		$I_F=50mA$	...	1000	
		$I_F=150mA$	...	1250	
Reverse leakage current	$I_R$	$V_R=25V$	...	0.03	uA
		$V_R=75V$	...	1	
Reverse recovery time	$T_{rr}$	$I_F=I_R=10mA_{dc}$ , $R_L=100\Omega$	...	4	ns
Diode capacitance	$C_D$	$V_R=0V, f=1MHz$	...	1.5	pF

### SOD-323



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.090	.107	2.30	2.70	
B	.063	.071	1.60	1.80	
C	.045	.053	1.15	1.35	
D	.031	.045	0.80	1.15	
E	.010	.016	0.25	0.40	
G	.004	.018	0.10	0.45	
H	.004	.010	0.10	0.25	
J	-----	.006	-----	0.15	

#### SUGGESTED SOLDER PAD LAYOUT



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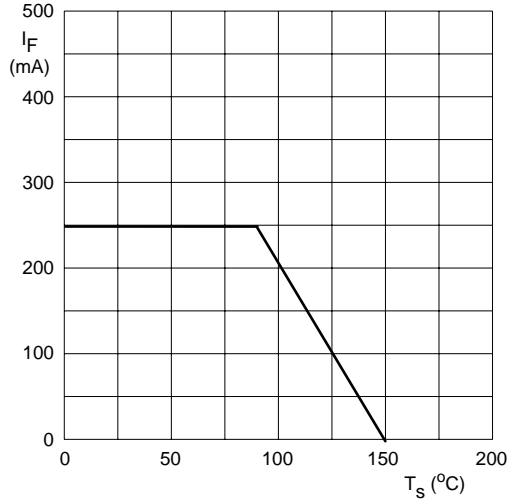


Fig.1 Maximum permissible continuous forward current as a function of soldering point temperature.

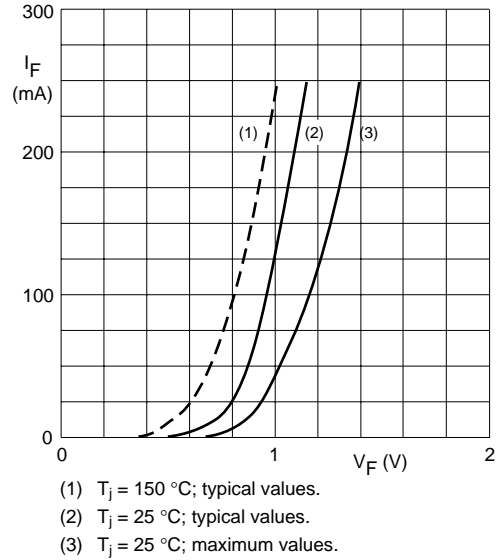
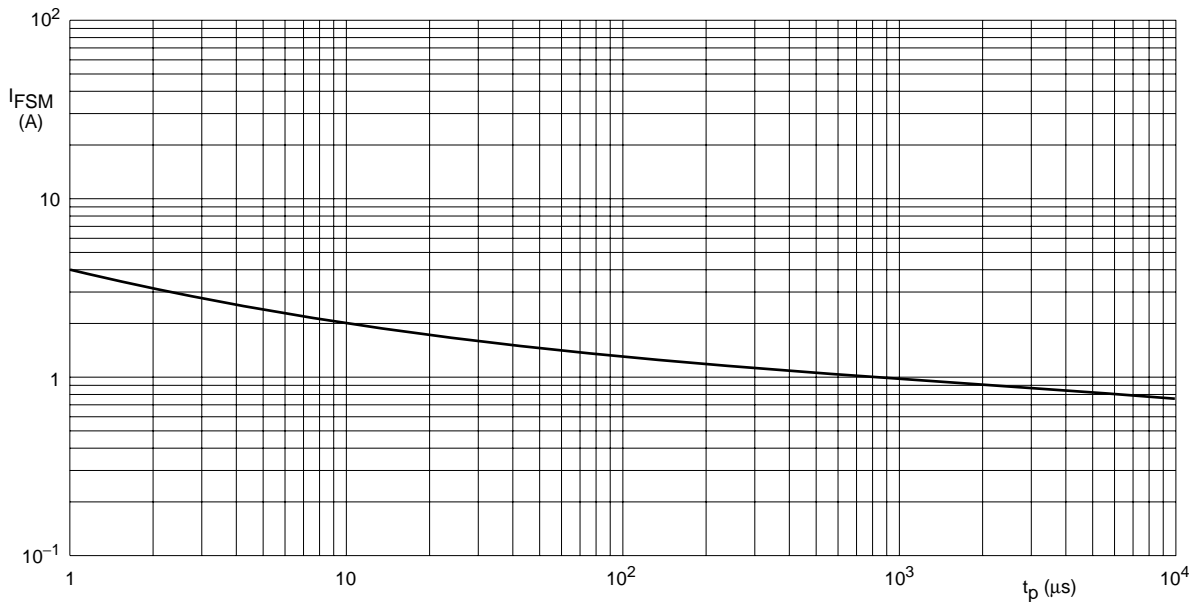


Fig.2 Forward current as a function of forward voltage.



Based on square wave currents.  
 $T_j = 25^\circ\text{C}$  prior to surge.

Fig.3 Maximum permissible non-repetitive peak forward current as a function of pulse duration.

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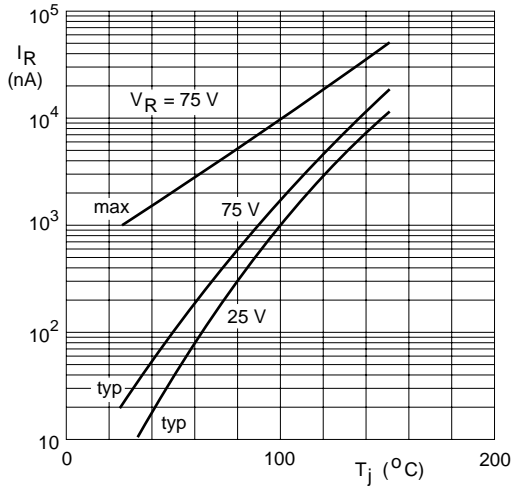
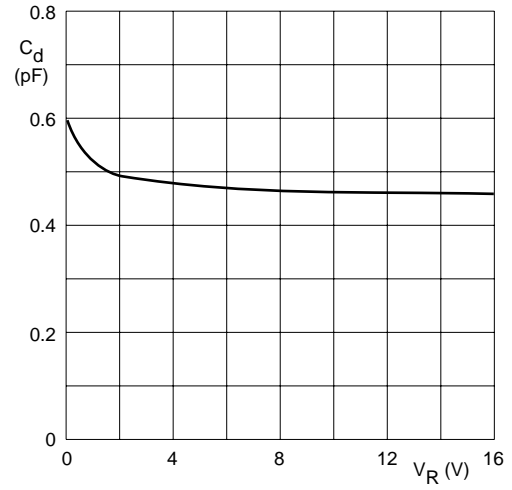


Fig.4 Reverse current as a function of junction temperature.



$f = 1 \text{ MHz}; T_j = 25 \text{ }^\circ\text{C}.$

Fig.5 Diode capacitance as a function of reverse voltage; typical values.



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### 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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