

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

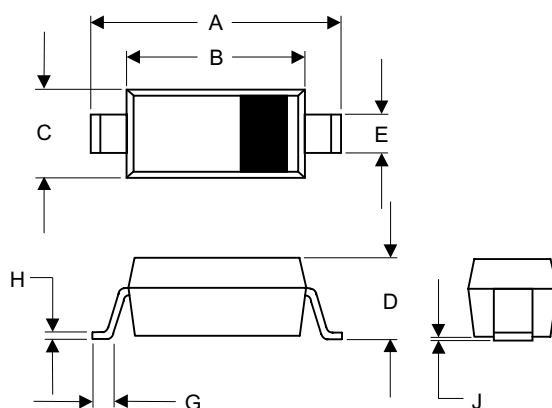
Maximum Ratings @ 25°C Unless Otherwise Specified

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 $t=1\mu s$ $t=1ms$ $t=1s$	I_{FSM}	4 1 0.5	A

Electrical Characteristics @ 25°C Unless Otherwise Specified

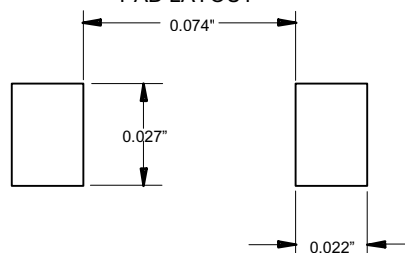
Parameter	Symbol	Test Conditons	MIN	MAX	UNIT
Reverse breakdown voltage	V_{BR}	$I_R=100\mu A$	100	...	V
Forward voltage	V_F	$I_F=1mA$	...	715	mV
		$I_F=10mA$	...	855	
		$I_F=50mA$	...	1000	
		$I_F=150mA$	...	1250	
Reverse leakage current	I_R	$V_R=25V$	...	0.03	μA
		$V_R=75V$	...	1	
Reverse recovery time	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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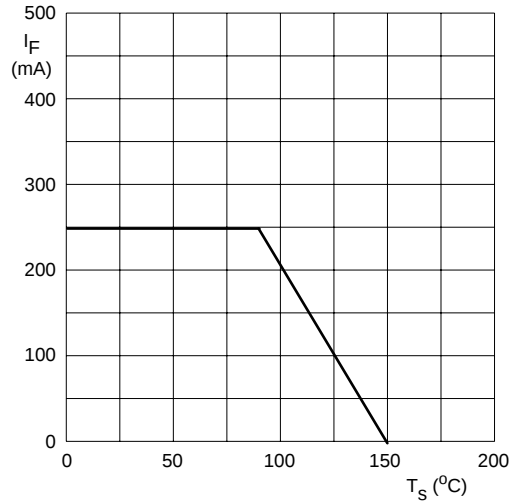


Fig.1 Maximum permissible continuous forward current as a function of soldering point temperature.

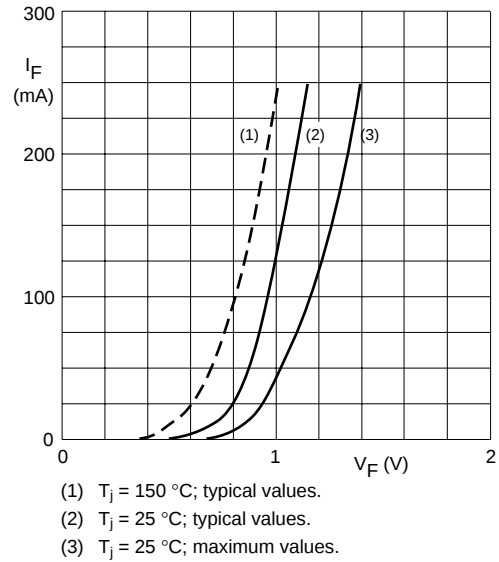
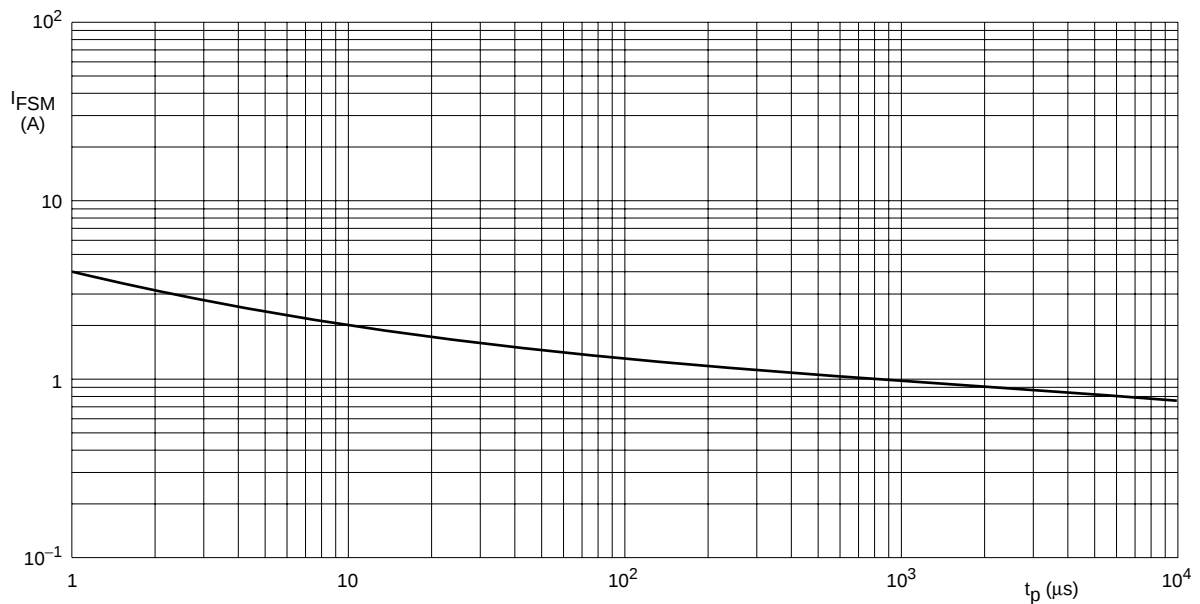


Fig.2 Forward current as a function of forward voltage.



Based on square wave currents.
 $T_j = 25$ °C prior to surge.

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

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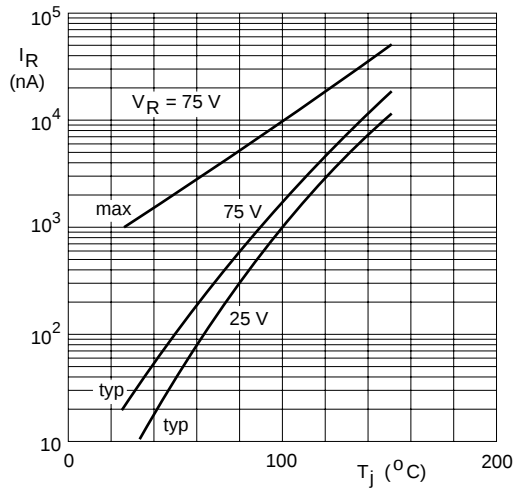
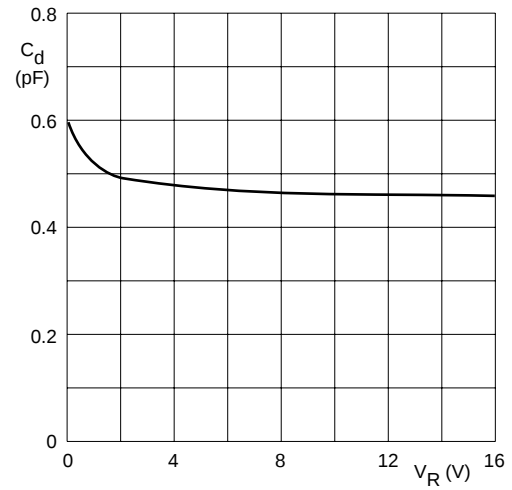


Fig.4 Reverse current as a function of junction temperature.



$f = 1$ MHz; $T_j = 25$ °C.

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

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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