Micro Commercial Components
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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

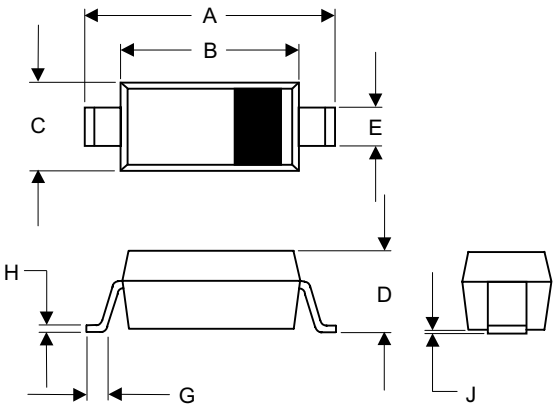
Maximum Ratings @ 25°C Unless Otherwise Specified

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	℃
Non-repetitive peak forward current t=1us t=1ms t=1s	I_{FSM}	 4 1 0.5	A

Electrical Characteristics @ 25°C Unless Otherwise Specified

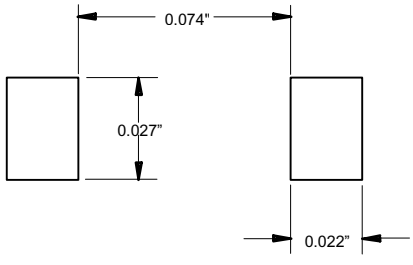
Parameter	Symbol	Test Conditons	MIN	MAX	UNIT
Reverse breakdown voltage	V_{BR}	I_R=100uA	100	…	V
Forward voltage	V_F	I_F=1mA	…	715	mV
		I_F=10mA	…	855	
		I_F=50mA	…	1000	
		I_F=150mA	…	1250	
Reverse leakage current	I_R	V_R=25V	…	0.03	uA
		V_R=75V	…	1	
Reverse recovery time	T_{rr}	I_F=I_R=10mAdc, R_L=100Ω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

SOD-323



DIMENSIONS					
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



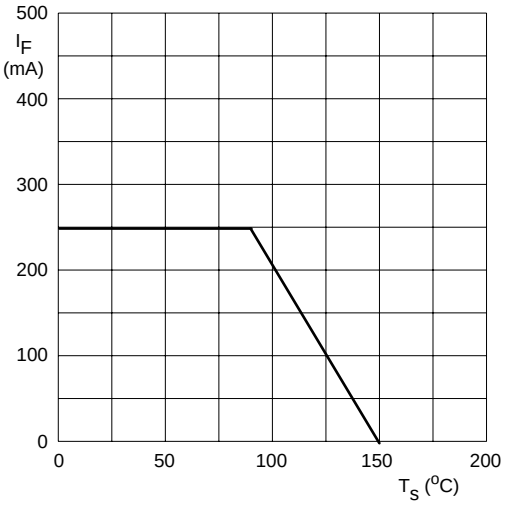
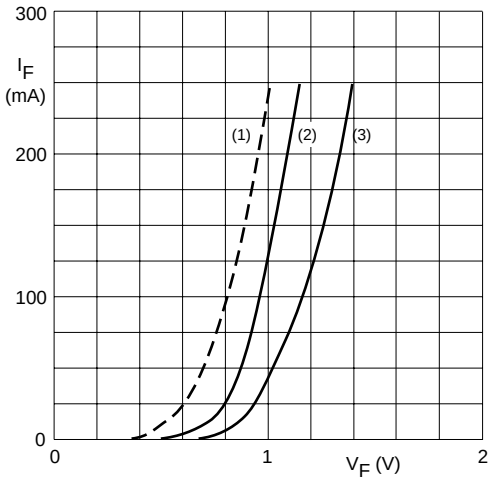
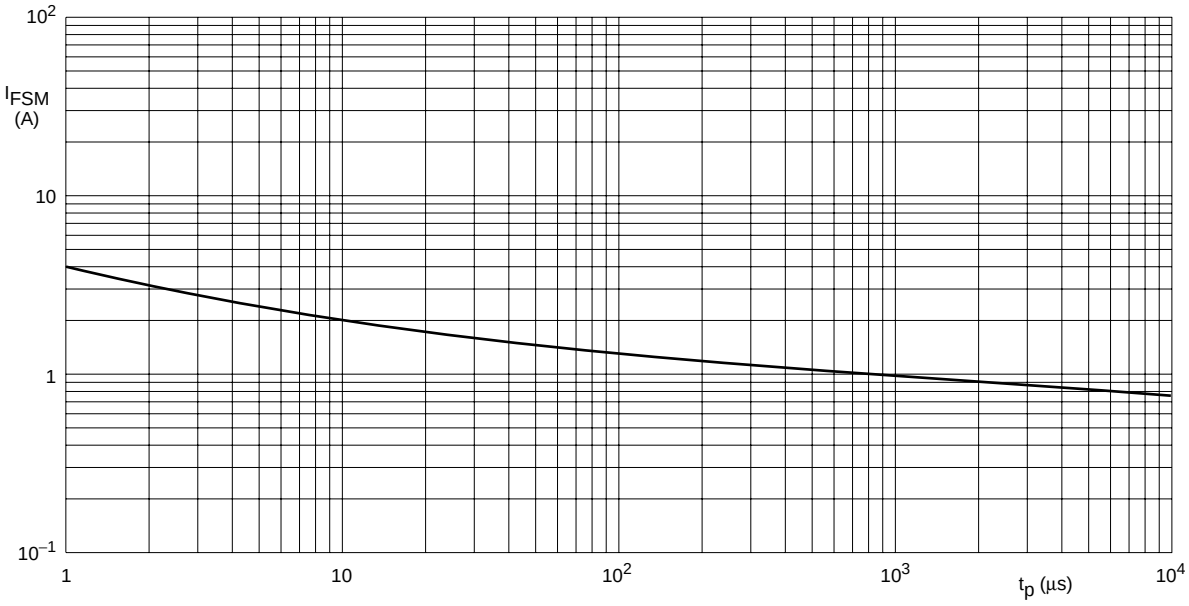


Fig.1 Maximum permissible continuous forward current as a function of soldering point temperature.



(1) T_j = 150 °C; typical values.
(2) T_j = 25 °C; typical values.
(3) T_j = 25 °C; maximum values.

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.

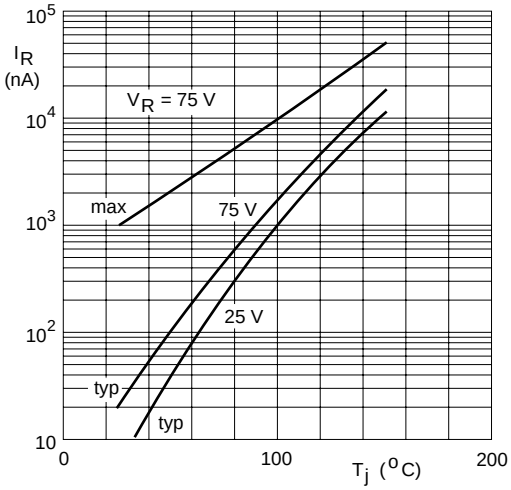
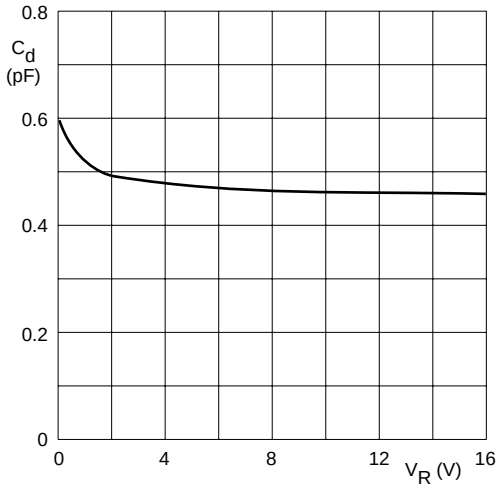


Fig.4 Reverse current as a function of junction temperature.



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