

Small Signal Diode



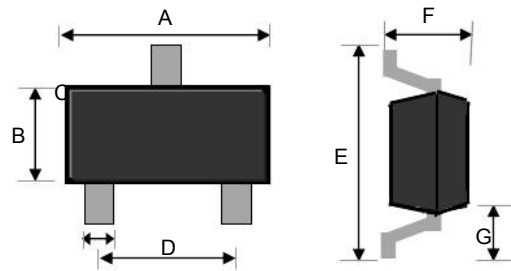
Features

- Metal-on-silicon Schottky Barrier
- Surface device type mounting
- Moisture sensitivity level 1
- Matte Tin(Sn) lead finish with Nickel(Ni) underplate
- Pb free version and RoHS compliant
- Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code

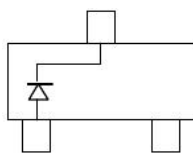
Mechanical Data

- Case : Flat lead SOT 23 small outline plastic package
- Terminal: Matte tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- High temperature soldering guaranteed: 260°C/10s
- Weight : 0.008gram (approximately)
- Marking Code : 43.44.45.46

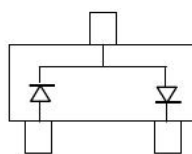
SOT-23



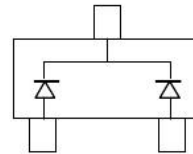
Dimensions	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.80	3.00	0.110	0.118
B	1.20	1.40	0.047	0.055
C	0.30	0.50	0.012	0.020
D	1.80	2.00	0.071	0.079
E	2.25	2.55	0.089	0.100
F	0.90	1.20	0.035	0.043
G	0.550 REF		0.022 REF	



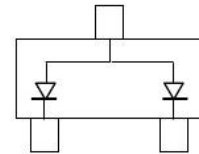
BAS40



BAS40-04



BAS40-05



BAS40-06

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

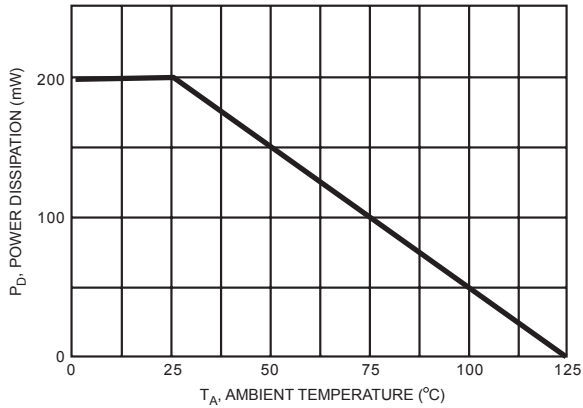
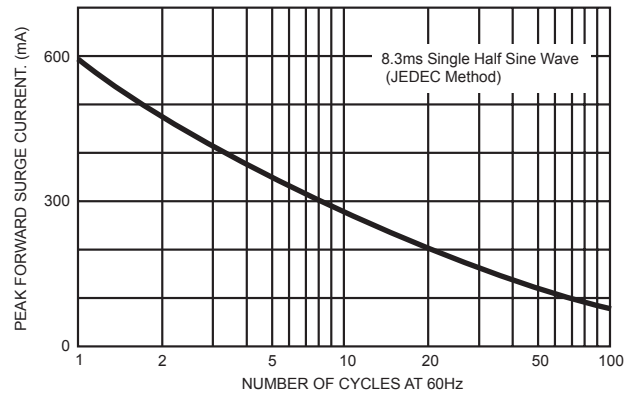
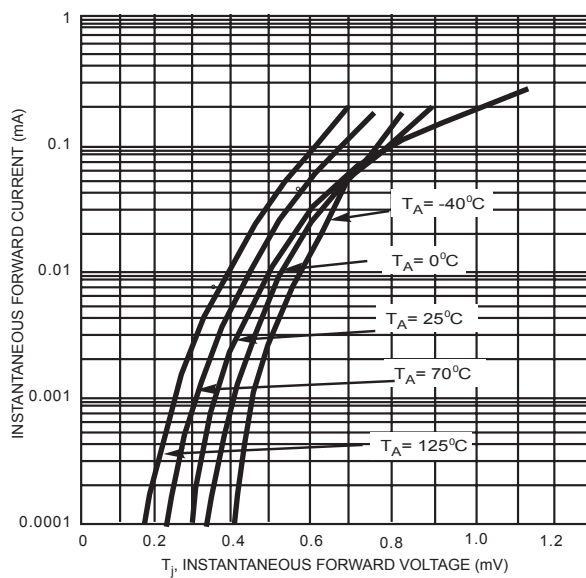
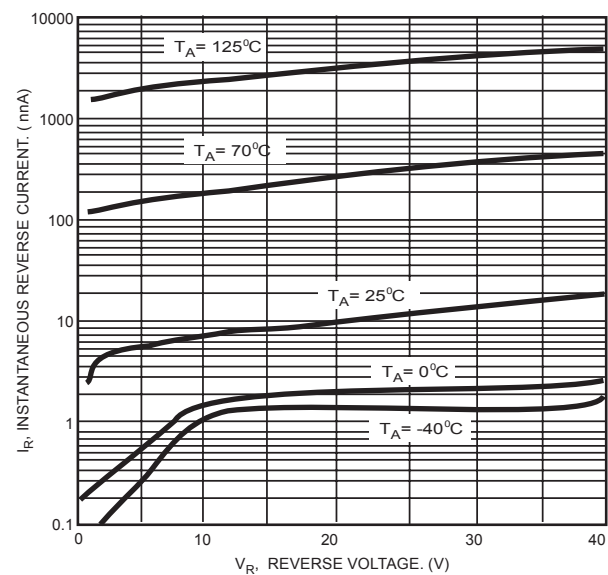
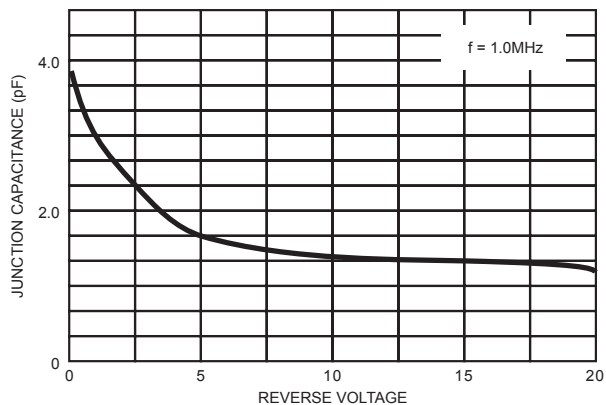
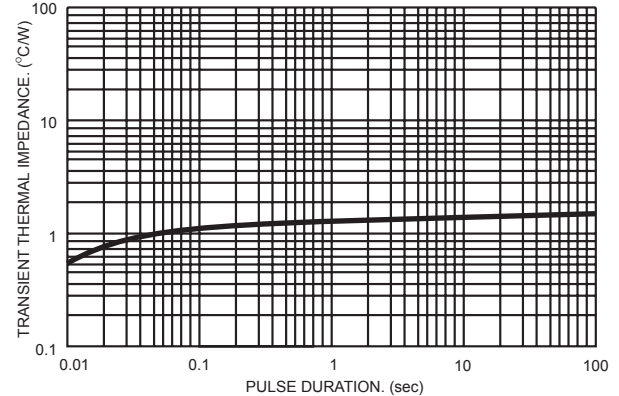
Type Number	Symbol	Value	Units
Power Dissipation	P_D	200	mW
Repetitive Peak Reverse Voltage	V_{RRM}	40	V
Reverse Voltage	V_R	40	V
Repetitive Peak Forward Current	I_{FRM}	200	mA
Mean Forward Current	I_o	200	mA
Non-Repetitive Peak Forward Surge Current (Note 1)	I_{FSM}	0.6	A
Thermal Resistance (Junction to Ambient) (Note 2)	$R_{\theta JA}$	357	°C/W
Junction and Storage Temperature Range	T_J, T_{STG}	-65 to + 125	°C

Electrical Characteristics

Type Number	Symbol	Min	Max	Units
Reverse Breakdown Voltage $I_R = 10\mu A$	$V_{(BR)}$	40	-	V
Forward Voltage $I_F = 1mA$ $I_F = 10mA$ $I_F = 40mA$	V_F	-	0.38	V
		-	0.50	
		-	1.00	
Reverse Leakage Current $V_R = 30V$	I_R	-	0.2	μA
Junction Capacitance $V_R = 1V, f = 1.0MHz$	C_J	-	5	pF
Reverse Recovery Time $I_F = I_R = 10mA, R_L = 100\Omega, I_{RR} = 1mA$	T_{rr}	-	5.0	ns

Notes:1. Test Condition : 8.3ms Single half Sine-Wave Superimposed on Rated Load (JEDEC Method)

Notes:2. Valid provided that electrodes are kept at ambient temperature

Small Signal Diode
Rating and Sharacteristic Curves (BAS40 / -04 / -05 / -06)
FIG.1- POWER DERATING CURVE

FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

FIG.3- TYPICAL FORWARD CHARACTERISTICS

FIG.4- TYPICAL REVERSE CHARACTERISTICS

FIG.5- TYPICAL TOTAL CAPACITANCE VS REVERSE VOLTAGE

FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS


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