

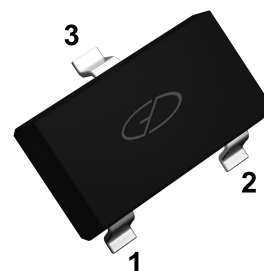
BAS40 Series Schottky Diode

Features

- Low turn-on voltage
- Fast switching
- PN junction guard ring for transient and ESD protection

Applications

- High speed switching applications
- Circuit protecting
- Voltage clamping



SOT-23

Schematic Diagram and Marking

BAS40 3 CATHODE 1 ANODE Marking: 43	BAS40-04 ANODE 1 CATHODE 2 3 CATHODE/ANODE Marking: 44
BAS40-05 1 ANODE 3 CATHODE 2 ANODE Marking: 45	BAS40-06 ANODE 3 CATHODE 1 CATHODE 2 Marking: 46

Maximum Ratings (T_A = 25°C unless otherwise noted)

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Reverse Voltage	V_{RRM} V_{RWM} V_R	40	V
Forward Continuous Current	I_{FM}	200	mA
Power Dissipation	P_d	350	mW
Forward Surge Current	I_{FSM}	600	mA
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	357	°C/W
Operating Junction Temperature Range	T_j	-55 to +125	°C
Storage Temperature Range	T_{STG}	-65 to +150	°C

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage	$V_{(BR)R}$	40	-	-	V	$I_{RS} = 10\mu\text{A}$
Forward Voltage	V_F	-	-	380 1000	mV	$t_P < 300\mu\text{s}, I_F = 1.0\text{mA}$ $t_P < 300\mu\text{s}, I_F = 40\text{mA}$
Reverse Leakage Current	I_R	-	20	200	nA	$t_P < 300\mu\text{s}, V_R = 30\text{V}$
Junction Capacitance	C_j	-	4.0	5.0	pF	$V_R = 0\text{V}, f = 1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	-	-	5.0	ns	$I_F = I_R = 10\text{mA}$ to $I_R = 1.0\text{mA}, R_L = 100\Omega$

Typical Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

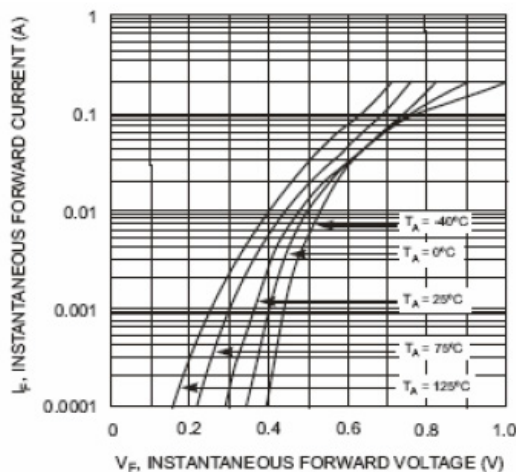


Fig. 1 Typical Forward Voltage

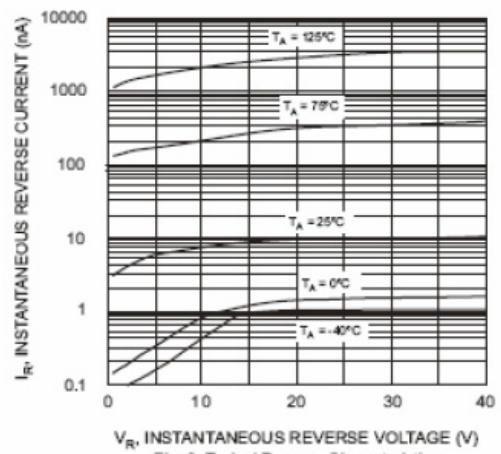


Fig. 2 Typical Reverse Characteristics

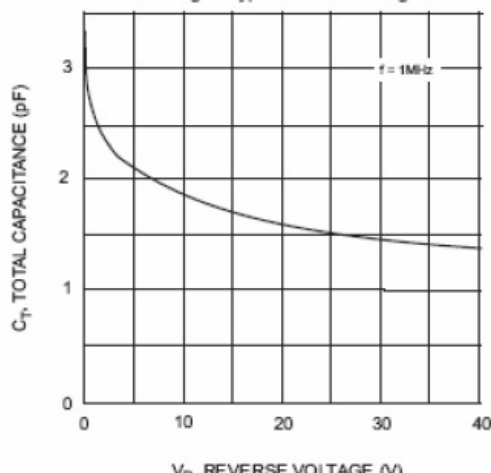


Fig. 3 Typical Capacitance

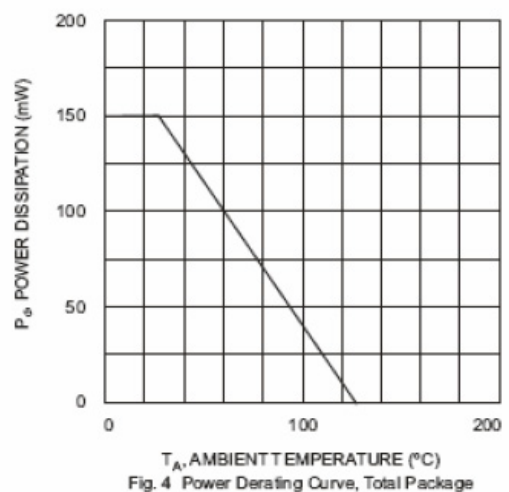
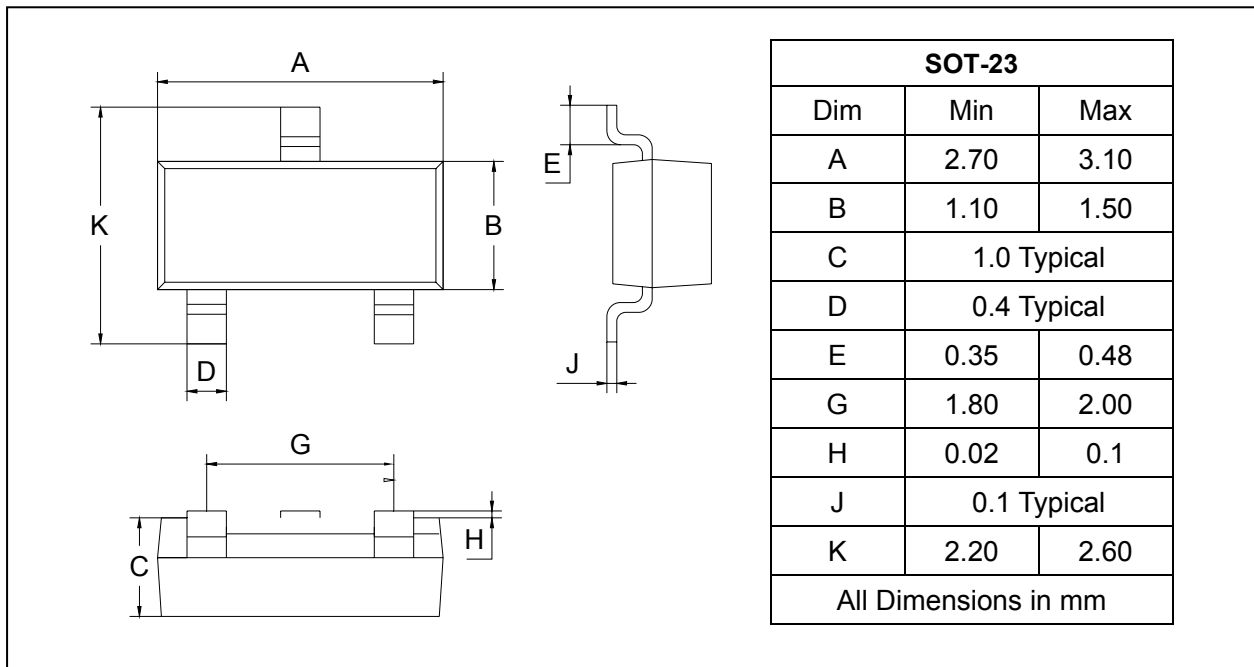


Fig. 4 Power Derating Curve, Total Package

Package Outline Dimensions

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Suggested Soldering Pad

