Surface Mount Schottky Diode

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BAS40 Thru BAS40-06

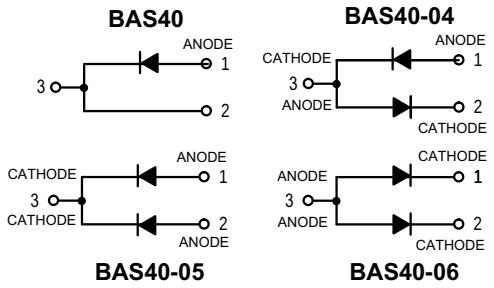
Voltage: 40 Volts
Power: 200mW

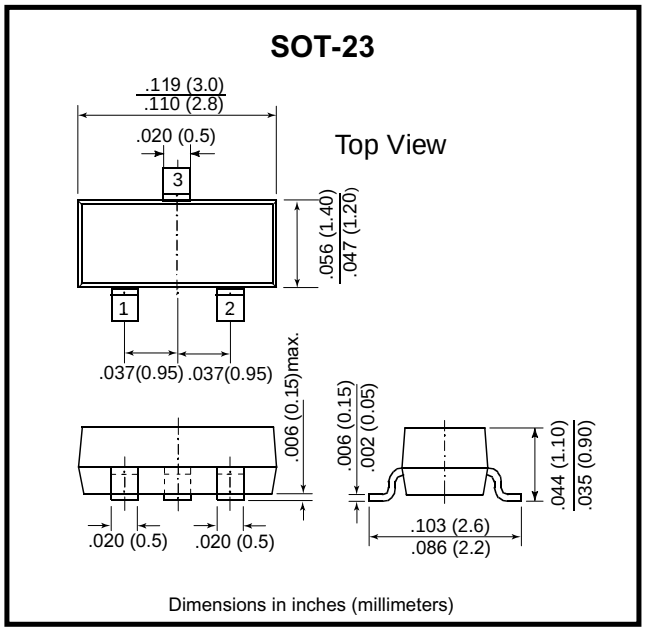
Features

Low Turn-on Voltage
Low Forward Voltage - 0.5V(Max) @ IF = 30 mA
Very Low Capacitance - Less Than 5.0pF @ 1V
For high speed switching application, circuit protection

Mechanical data

Case: SOT-23, Molded Plastic
Weight: 0.008 grams (approx.)
Mounting Position: Any





Maximum Ratings and Thermal Characteristics (TA = 25°C unless otherwise noted)

Rating	Symbol	Value	Units
Repetitive Peak Reverse Voltage	V_{RRM}	40	V
Forward Continuous Current at Tamb = 25°C	I_F	200(1)	mA
Surge Forward Current at tp < 1 s, Tamb = 25°C	I_{FSM}	600(1)	mA
Power Dissipation(1) at Tamb = 25°C	P_{tot}	200(1)	mW
Thermal Resistance Junction to Ambiant Air	R_{thJA}	430(1)	°C/W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_S	–55 to +150	°C

Electrical Characterics (TA = 25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Reverse Breakdown Voltage	V(BR)R	IR =10μA (pulsed)	40.0	-	-	V
Leakage Current	IR	Pulse Test tp < 300μs VR = 30V	-	20	100.0	nA
Forward Voltage	VF	Pulse Test tp < 300μs IF = 1mA IF = 40mA	- -	- -	380 1000	mV mV
Capacitance	Ctot	VR = 0V f = 1MHz	-	40	5	pF
Reverse Recovery Time	Trr	IF = 10mA, IR = 10mA Irr = 1mA, RL = 100Ω	-	-	5	nS

Note: (1) Device on fiberglass substrate, see layout on next page.

RATING AND CHARACTERISTIC CURVES (BAS40 thru BAS40-06)

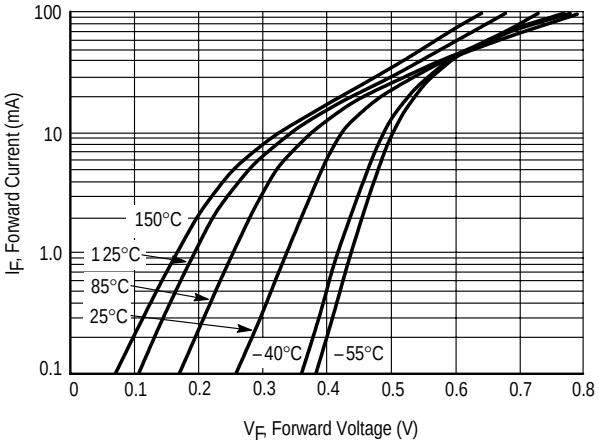


Figure 1. Typical Forward Voltage

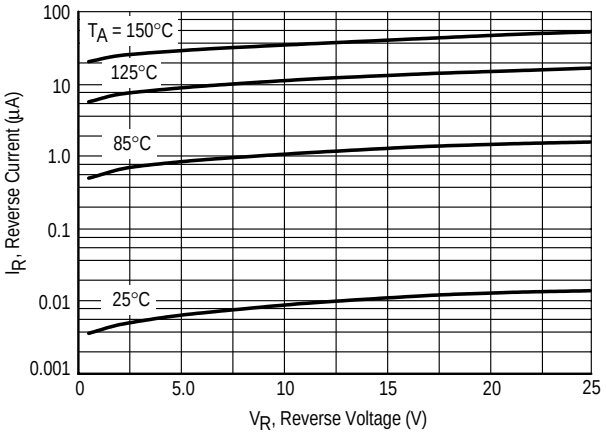


Figure 2. Reverse Current versus Reverse Voltage

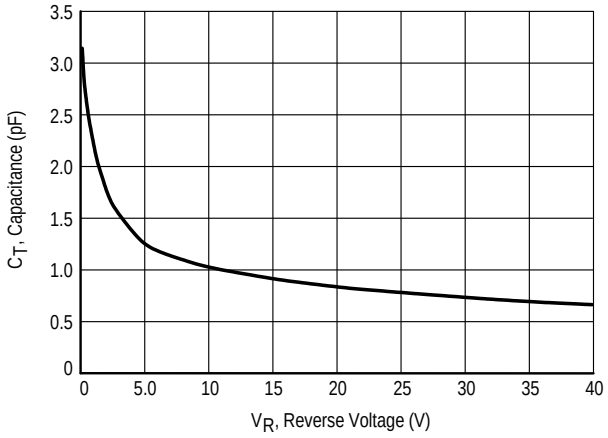


Figure 3. Typical Capacitance