



BAS40 / -04 / -05 / -06

Surface Mount Schottky Barrier Diode



Voltage Range
40 Volts
350m Watts Power Dissipation

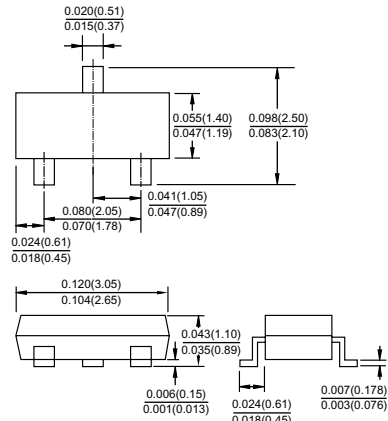
Features

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

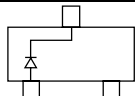
Mechanical Data

- ✧ Case: SOT-23, Molded plastic
- ✧ Terminals: Solderable per MIL-STD-202, Method 208
- ✧ Marking & Polarity: See diagram below
- ✧ Weight: 0.008 grams (approx.)

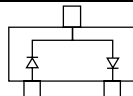
SOT-23



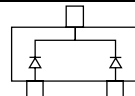
Dimensions in inches and (millimeters)



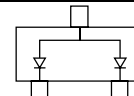
BAS40 Marking: 43



BAS40-04 Marking: 44



BAS40-05 Marking: 45



BAS40-06 Marking: 46

Maximum Ratings $T_A=25^{\circ}\text{C}$ unless otherwise specified

Type Number	Symbol	BAS40	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	40	V
Forward Continuous Current (Note 1)	I _{FM}	200	mA
Non-Repetitive Peak Forward Surge Current @ $t \leq 1.0\text{s}$	I _{FSM}	600	mA
Power Dissipation (Note 1)	P _d	350	mW
Thermal Resistance Junction to Ambient Air (Note 1)	R _{θJA}	357	$^{\circ}\text{C/W}$
Operating Junction Temperature Range	T _J	-55 to + 125	$^{\circ}\text{C}$
Storage Temperature Range	T _{STG}	-65 to + 150	$^{\circ}\text{C}$

Electrical Characteristics

Type Number	Symbol	Min	Typ	Max	Units
Reverse Breakdown Voltage $I_R=10\mu\text{A}$	V(BR)	40	-	-	V
Reverse Leakage Current $t_p<300\mu\text{s}$, $V_R=30\text{V}$	I _R	--	20	200	nA
Forward Voltage Drop $t_p<300\mu\text{s}$, $I_F=1.0\text{mA}$ $t_p<300\mu\text{s}$, $I_F=40\text{mA}$	V _F	--	- -	380 1000	mV
Junction Capacitance $V_R=0$, $f=1.0\text{MHz}$	C _j	-	4.0	5.0	pF
Reverse Recovery Time (Note 2)	t _{rr}	-	-	5.0	nS

Notes: 1. Valid Provided that Terminals are Kept at Ambient Temperature.

2. Reverse Recovery Test Conditions: $I_F=I_R=10\text{mA}$, $I_R=1.0\text{mA}$, $R_L=100\Omega$.