

Features

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

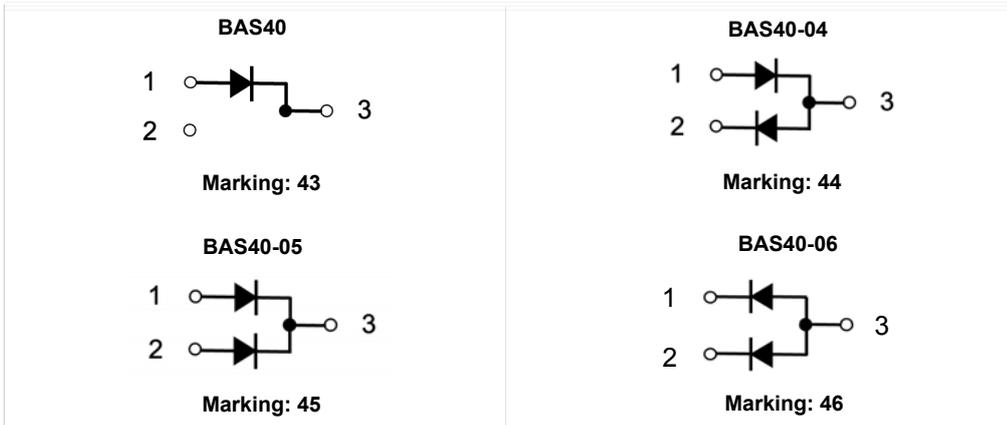
Applications

- High speed switching applications
- Circuit protecting
- Voltage clamping



SOT-23

Schematic Diagram



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

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	40	V
Working Peak Reverse Voltage	V _{RWM}		V
DC Reverse Voltage	V _R		V
Forward Continuous Current	I _{FM}	200	mA
Power Dissipation	P _D	200	mW
Forward Surge Current (8.3 ms single half sine-wave)	I _{FSM}	600	mA
Thermal Resistance, Junction-to-Ambient	R _{θJA}	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)

Parameter	Symbol	Conditions	Min.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_{RS}=10\mu\text{A}$	40	-	V
Forward Voltage	V_F	$t_P<300\mu\text{s}, I_F=1\text{mA}$	-	380	mV
		$t_P<300\mu\text{s}, I_F=40\text{mA}$	-	1000	mV
Reverse Leakage Current	I_R	$t_P<300\mu\text{s}, V_R=30\text{V}$	-	200	nA
Junction Capacitance	C_J	$V_R=0\text{V}, f=1\text{MHz}$	-	5	pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=10\text{mA}, R_L = 100\Omega$ $I_R=1.0\text{mA}$	-	5	ns

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

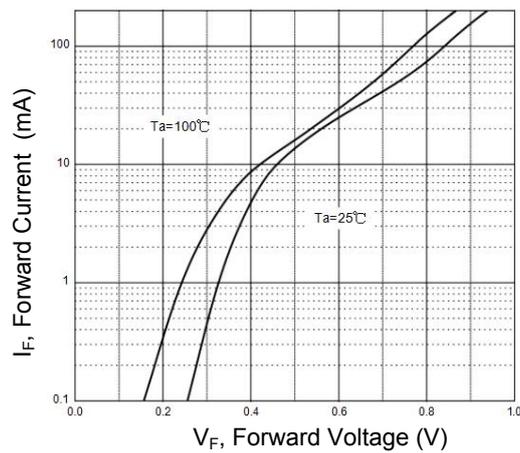


Figure 1. Forward Characteristics

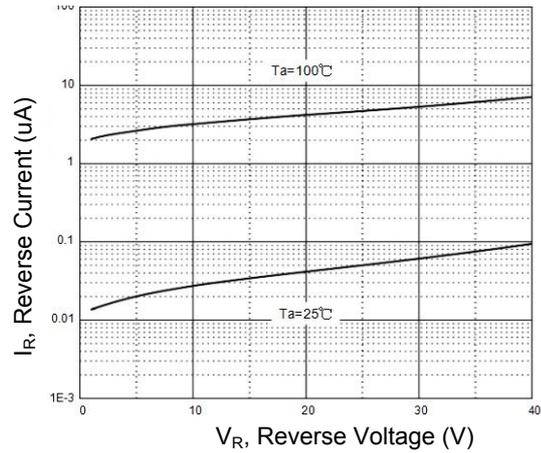


Figure 2. Reverse Characteristics

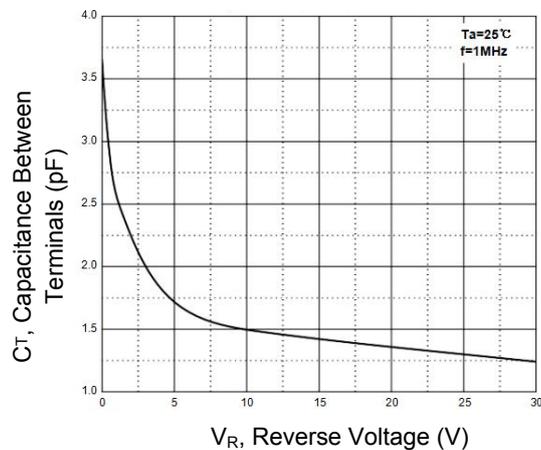


Figure 3. Capacitance Characteristics

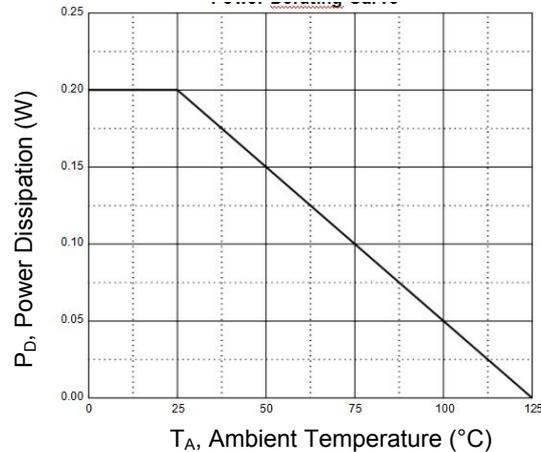
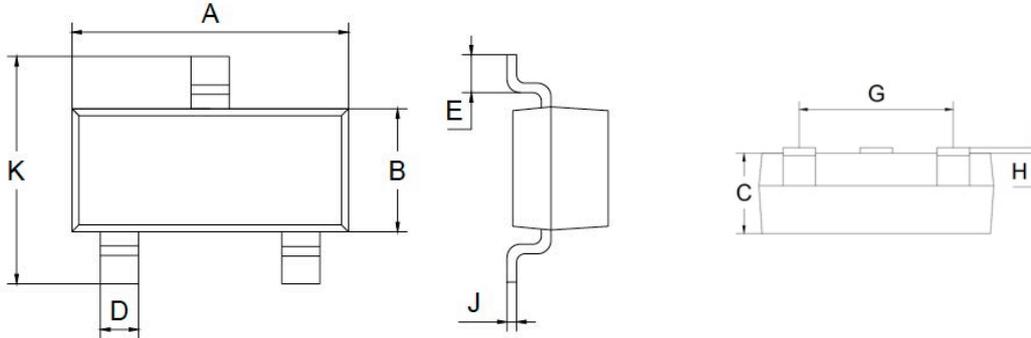


Figure 4. Power Derating Curve

Package Outline Dimensions (SOT-23)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	2.700	3.100	0.106	0.122
B	1.100	1.500	0.043	0.059
C	1.000 TYP		0.039 TYP	
D	0.400 TYP		0.016 TYP	
E	0.350	0.480	0.014	0.019
G	1.800	2.000	0.071	0.079
H	0.020	0.100	0.001	0.004
J	0.100 TYP		0.004 TYP	
K	2.200	2.600	0.087	0.102

Recommended Pad Layout

