

Features

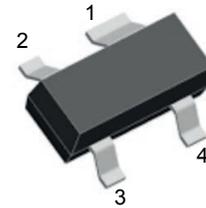
- High switching speed
- High breakdown voltage
- Low leakage current
- Low capacitance

Mechanical Data

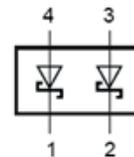
- Case: SOT-143
- Terminals: solderable per MIL-STD-202, method 208

Typical Applications

- Ultra high-speed switching
- Voltage clamping



SOT-143



Schematic Diagram

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

Parameter	Symbol	Value	Unit
Reverse Voltage	V_R	40	V
Forward Continuous Current ¹	I_{FM}	200	mA
Repetitive Peak Forward Current	I_{FRM}	120	mA
Non-Repetitive Peak Forward Current @ 8.3ms	I_{FSM}	200	mA
Power Dissipation ¹	P_D	250	mW
Thermal Resistance, Junction to Ambient ¹	$R_{\theta JA}$	400	$^{\circ}\text{C/W}$
Operating Junction Temperature Range	T_J	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward Voltage ²	V_F	$I_F=1\text{mA}$	-	-	0.38	V
		$I_F=10\text{mA}$	-	-	0.55	V
		$I_F=40\text{mA}$	-	-	1	V
Reverse Leakage Current ³	I_R	$V_R=30\text{V}$	-	-	0.2	μA
Capacitance Between Terminals	C_T	$V_R=0\text{V}$, $f=1\text{MHz}$	-	2.5	5	pF

Notes:

1. Part mounted on FR-4 board with recommended pad layout.
2. Pulse test, $t_p \leq 300\mu\text{s}$.
3. Pulse test, $t_p \leq 5\text{ms}$.

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

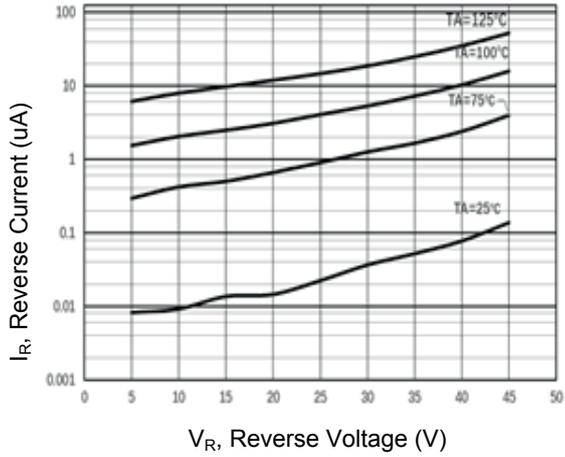


Figure 1. Typical Reverse Characteristics

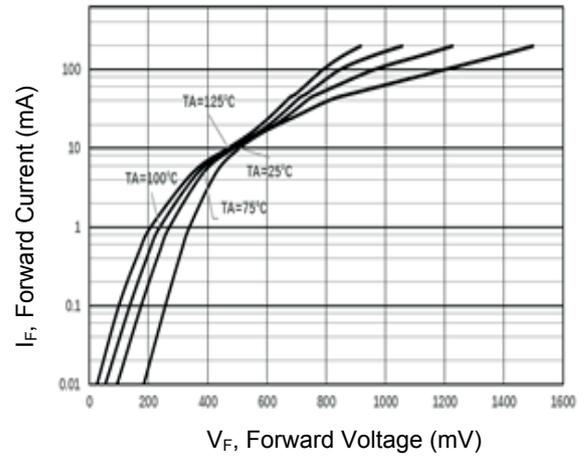


Figure 2. Typical Forward Characteristics

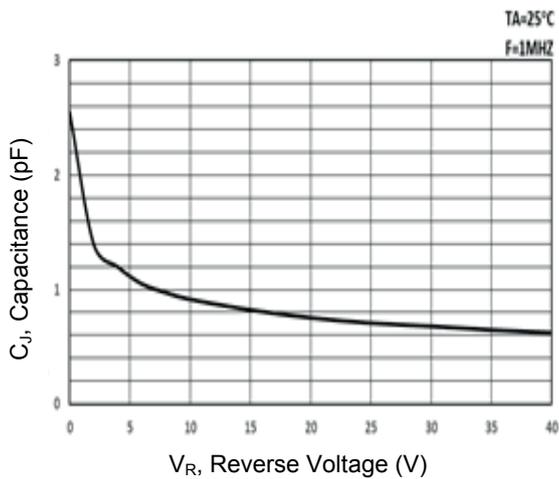


Figure 3. Capacitance vs. Reverse Voltage

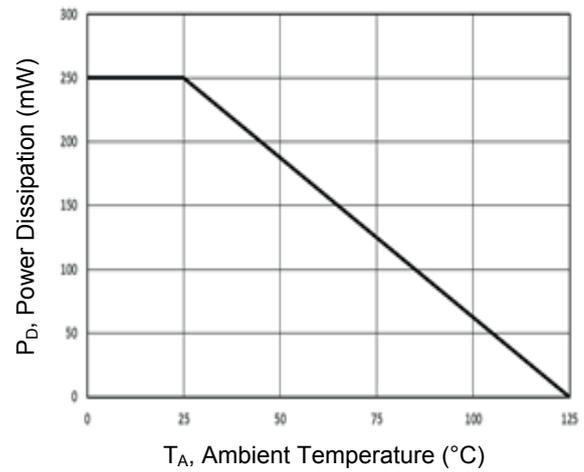
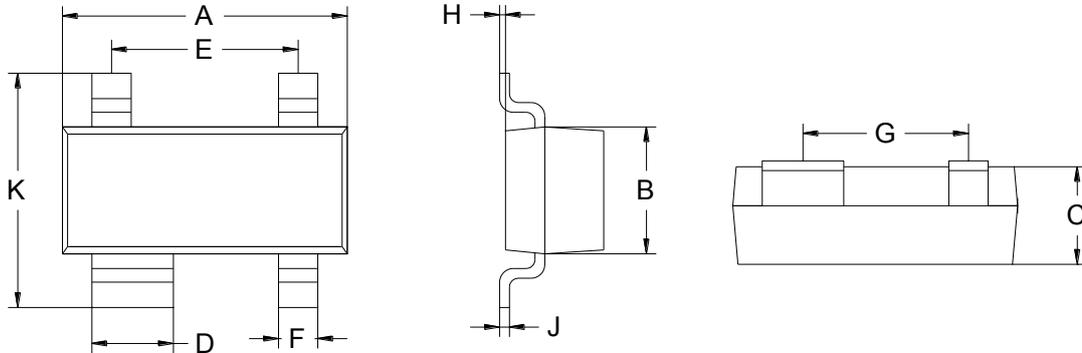


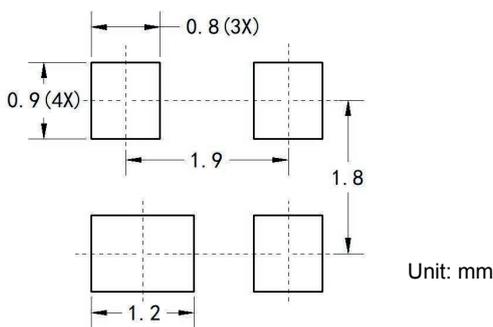
Figure 4. Derating Curve (P_D-T_A)

Package Outline Dimensions (SOT-143)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.70	3.10	0.106	0.122
B	1.10	1.50	0.043	0.059
C	0.90	1.10	0.035	0.043
D	0.78	0.88	0.031	0.035
E	1.80	2.00	0.071	0.079
F	0.37	0.43	0.015	0.017
G	1.59	1.79	0.063	0.070
H	0.02	0.10	0.001	0.004
J	0.05	0.15	0.002	0.006
K	2.20	2.60	0.087	0.102

Recommended Pad Layout



Order Information

Device	Package	Marking	Packaging	SPQ
GSBAS40-07	SOT-143	47	Tape & Reel	3,000 Pcs / Reel