

Features

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

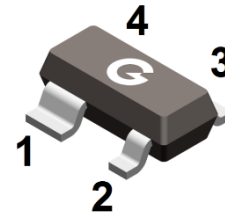
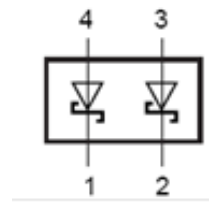
HF

Typical Applications

- Ultra high-speed switching
- Voltage clamping

Mechanical Data

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



SOT-143

Ordering Information

Part Number	Package	Shipping	Marking Code
BAS40-07	SOT-143	3000 pcs / Tape&Reel	47

Maximum Ratings (@T_A=25°C unless otherwise specified)

Parameter	Symbol	Limits	Unit
Reverse Voltage	V _R	40	V
Forward Continuous Current *	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 *	P _d	250	mW

* part mounted on FR-4 board with recommended pad layout

Thermal Characteristics

Parameter	Symbol	Limits	Unit
Thermal Resistance, Junction to Ambient *	$R_{\theta JA}$	400	$^{\circ}\text{C}/\text{W}$
Operating Junction Temperature Range	T_j	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

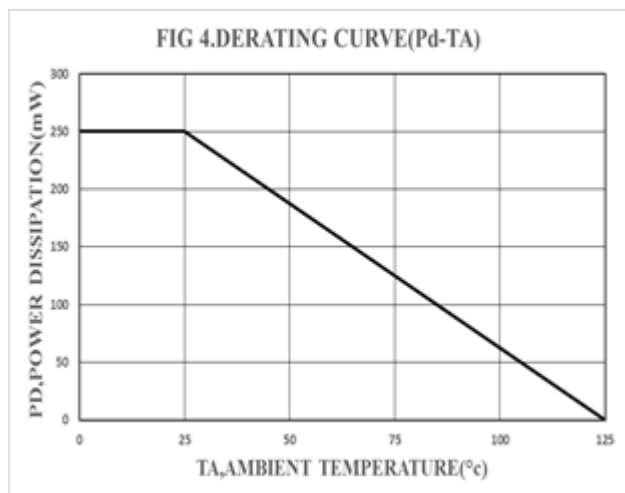
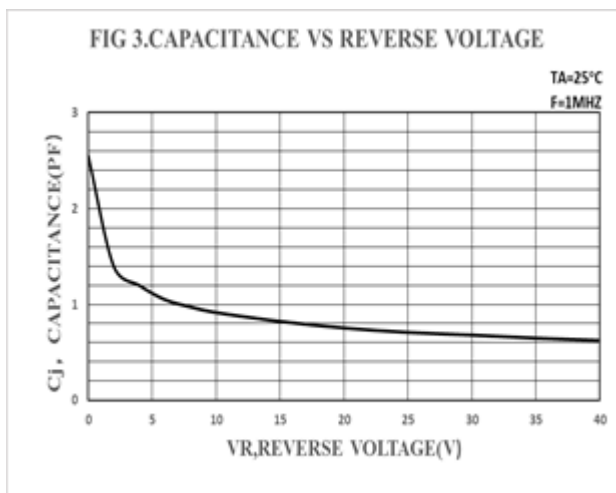
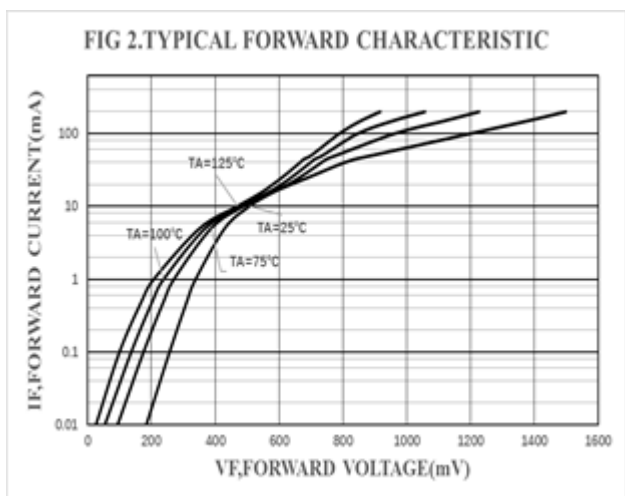
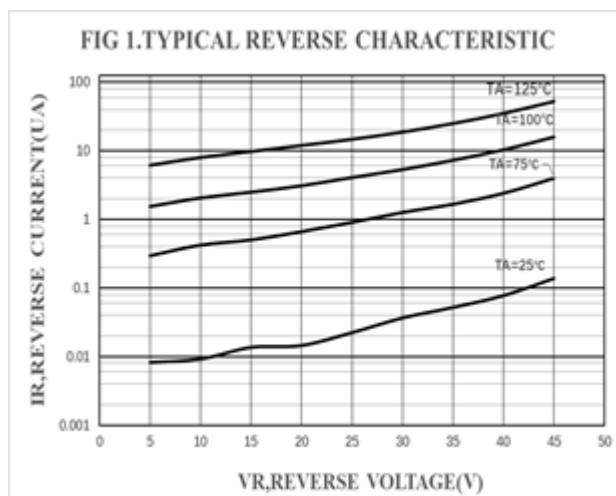
Electrical Characteristics (@ $T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward Voltage *1	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 *2	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

*1: pulse test, $t_p \leq 300\mu\text{s}$

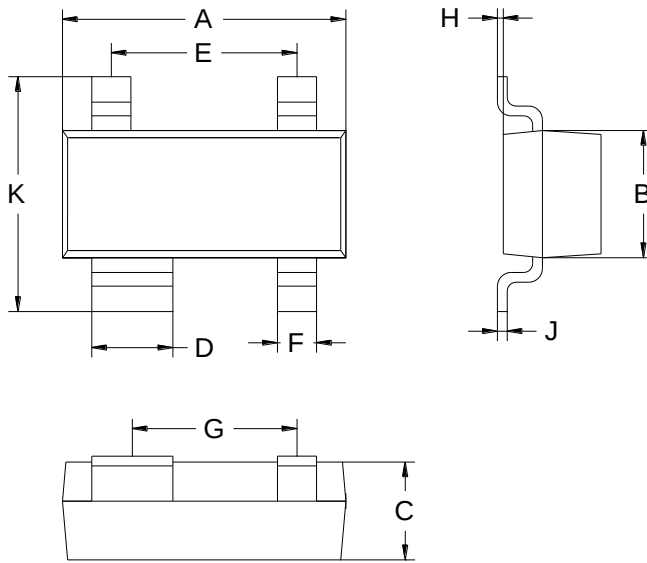
*2: pulse test, $t_p \leq 5\text{ms}$

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



Package Outline Dimensions (unit: mm)

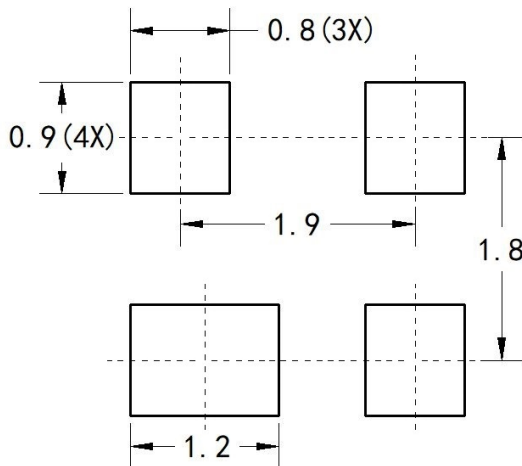
SOT-143



SOT-143		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.78	0.88
E	1.80	2.00
F	0.37	0.43
G	1.59	1.79
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60

Mounting Pad Layout (unit: mm)

SOT-143



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