

### Features

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

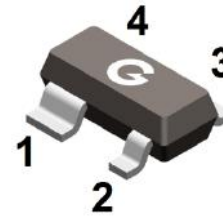
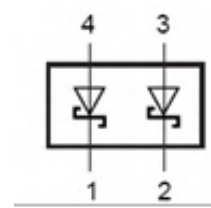
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### Typical Applications

- 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<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Limits	Unit
Reverse Voltage	V <sub>R</sub>	40	V
Forward Continuous Current *	I <sub>FM</sub>	200	mA
Repetitive Peak Forward Current	I <sub>FRM</sub>	120	mA
Non-Repetitive Peak Forward Current @8.3ms	I <sub>FSM</sub>	200	mA
Power Dissipation *	P <sub>d</sub>	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	$^{\circ}C/W$
Operating Junction Temperature Range	$T_j$	-55 to +125	$^{\circ}C$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^{\circ}C$

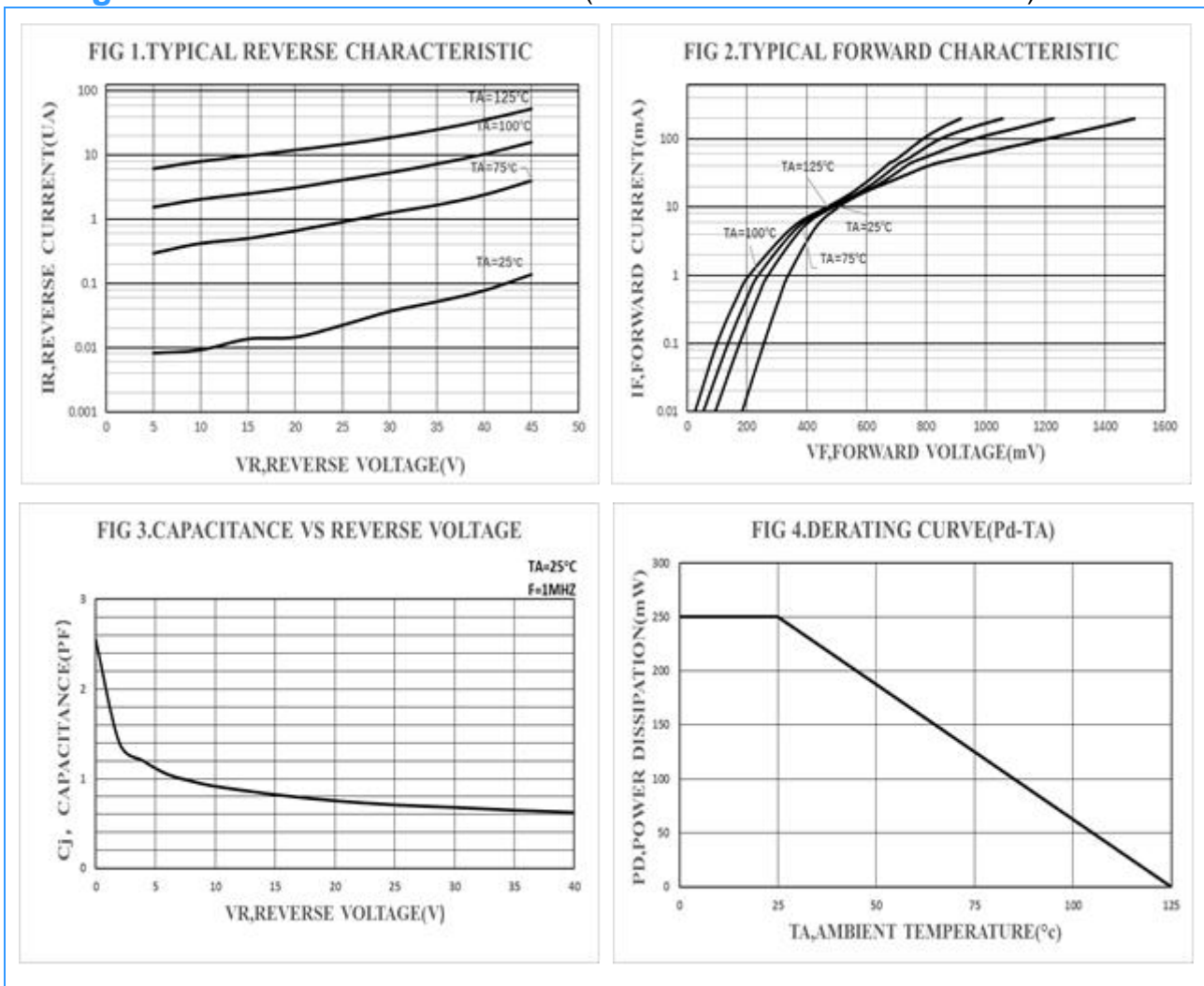
### Electrical Characteristics (@ $T_A=25^{\circ}C$ unless otherwise specified)

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

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

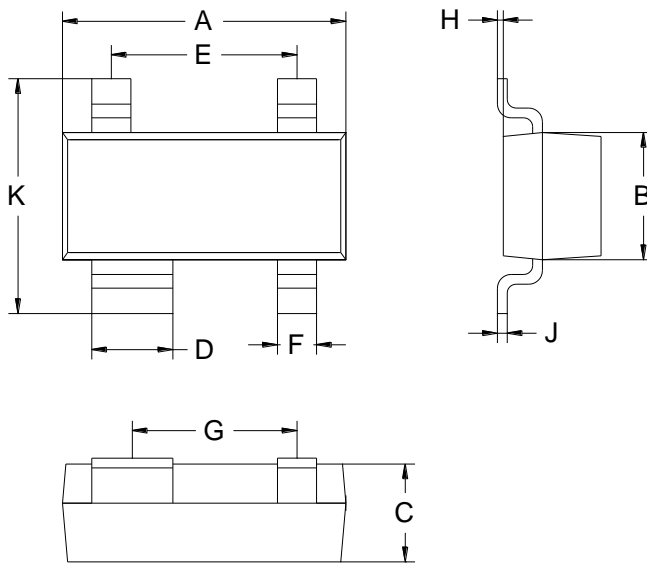
\*2: pulse test,  $t_p \leq 5ms$

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



Package Outline Dimensions (unit: mm)

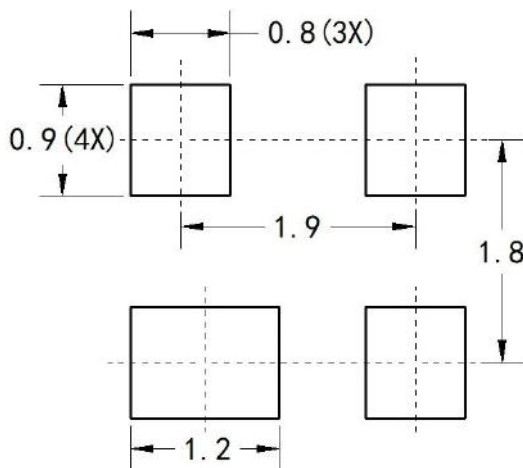
SOT-143



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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