

Features

- Low turn-on voltage.
- Fast switching.
- Ultra-small surface mount package.
- PN Junction Guard Ring for Transient and ESD Protection.

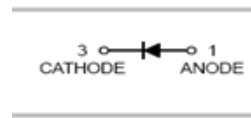
HF

Typical Applications

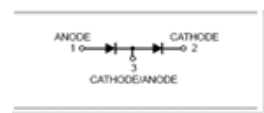
- General purpose switching application.

Mechanical Data

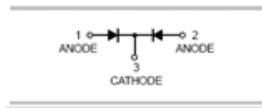
- Case: SOT-523
- Terminals: solderable per MIL-STD-202, Method 208.



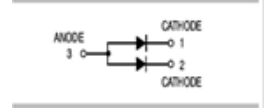
BAS40T



BAS40-04T



BAS40-05T



BAS40-06T



SOT-523

Ordering Information

Part Number	Package	Shipping	Marking Code
BAS40T	SOT-523	3000 pcs / Tape & Reel	43
BAS40-04T	SOT-523	3000 pcs / Tape & Reel	44
BAS40-05T	SOT-523	3000 pcs / Tape & Reel	45
BAS40-06T	SOT-523	3000 pcs / Tape & Reel	46

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

Parameter	Symbol	Limits	Unit
Peak Repetitive Peak Reverse Voltage	V _{RRM}	40	V
Working Peak Reverse Voltage	V _{RWM}		
DC Reverse Voltage	V _R		
RMS Reverse Voltage	V _{R(RMS)}	28	V
Forward Continuous Current *	I _{FM}	200	mA
Non-Repetitive Peak Forward Surge Current @8.3ms	I _{FSM}	600	mA
Power Dissipation *	P _d	150	mW

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

Thermal Characteristics

Parameter	Symbol	Limits	Unit
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	667	$^{\circ}\text{C/W}$
Operating Junction Temperature Range	T_j	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

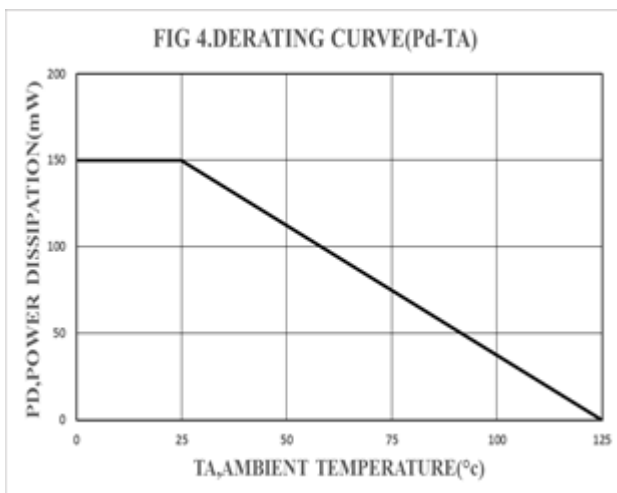
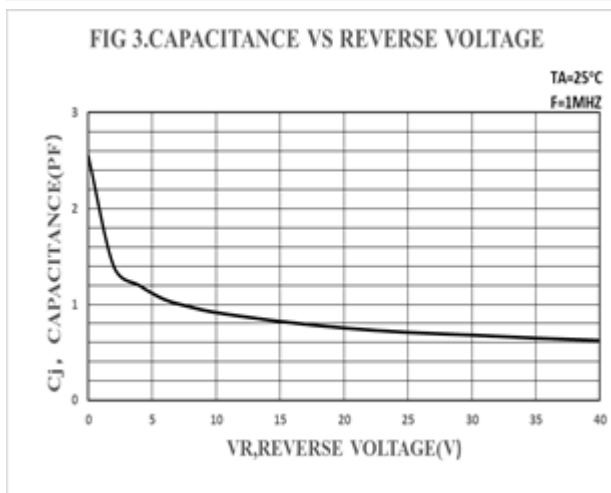
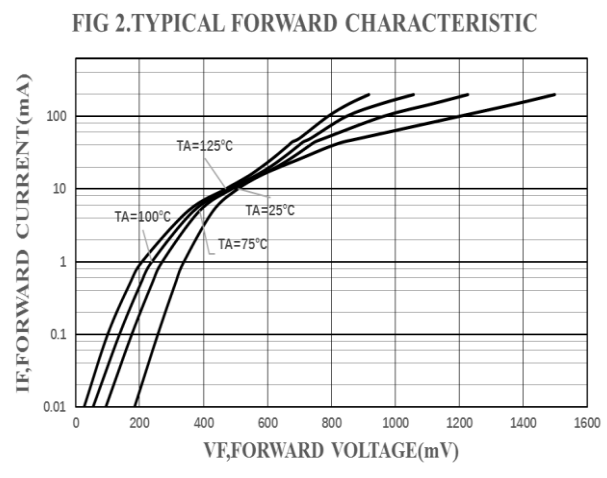
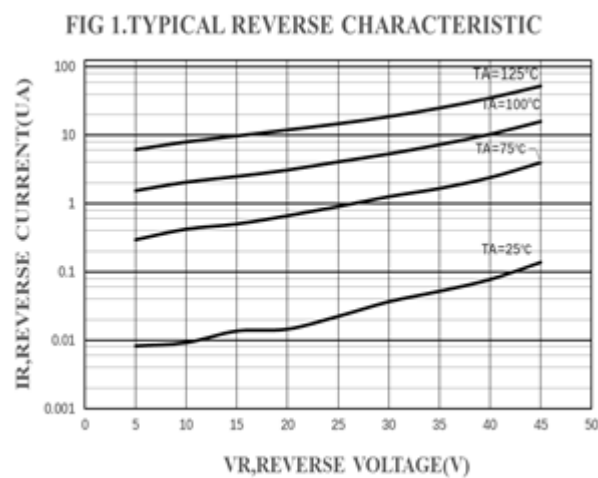
Electrical Characteristics (@ $T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward Voltage *1	V_F	$I_F=1\text{mA}$			0.38	V
		$I_F=40\text{mA}$			1	V
Reverse Leakage Current *2	I_R	$V_R=30\text{V}$			200	nA
Capacitance Between Terminals	C_T	$V_R=0\text{V}, f=1\text{MHz}$		2.5	5	pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=10\text{mA}$ $I_{rr}=1.0\text{mA}, R_L=100\Omega$			5	ns

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

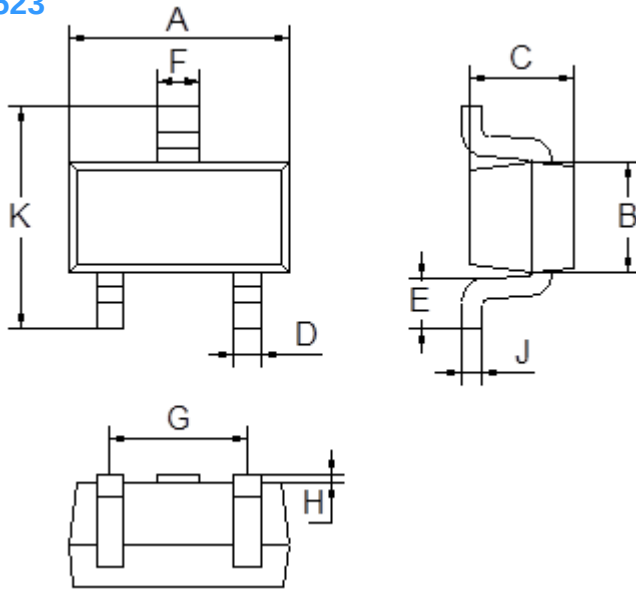
*2: pulse test, $t_p \leq 5\text{ms}$

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



Package Outline Dimensions(unit:mm)

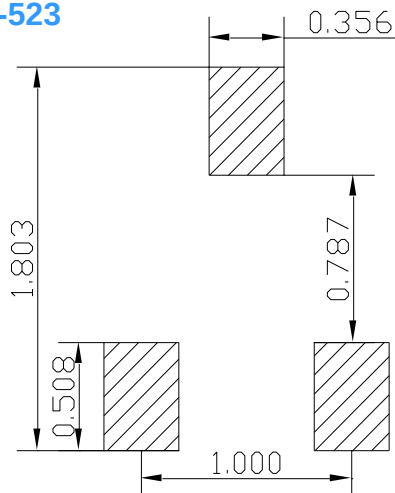
SOT-523



SOT-523		
Dim	Min	Max
A	1.50	1.70
B	0.75	0.85
C	0.60	0.80
D	0.15	0.30
E	0.30	0.40
F	0.25	0.40
G	0.90	1.10
H	0.02	0.10
J	0.08	0.18
K	1.45	1.75

Mounting Pad Layout(unit:mm)

SOT-523



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