

Features

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

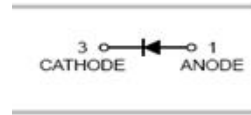
HF

Typical Applications

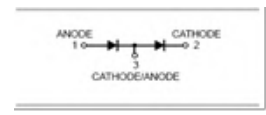
- For general purpose switching applications.

Mechanical Data

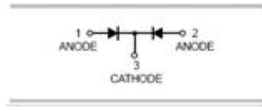
- Case: SOT-323
- Terminals: solderable per MIL-STD-202, Method 208.



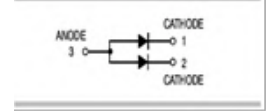
BAS40W



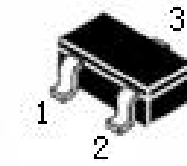
BAS40W-04



BAS40W-05



BAS40W-06



SOT-323

Ordering Information

Part Number	Package	Shipping	Marking Code
BAS40W	SOT-323	3000 pcs / Tape & Reel	43
BAS40W-04	SOT-323	3000 pcs / Tape & Reel	44
BAS40W-05	SOT-323	3000 pcs / Tape & Reel	45
BAS40W-06	SOT-323	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	200	mW

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

Thermal Characteristics

Parameter	Symbol	Limits	Unit
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	500	$^{\circ}C/W$
Operating Junction Temperature Range	T_j	-55 to +125	$^{\circ}C$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}C$

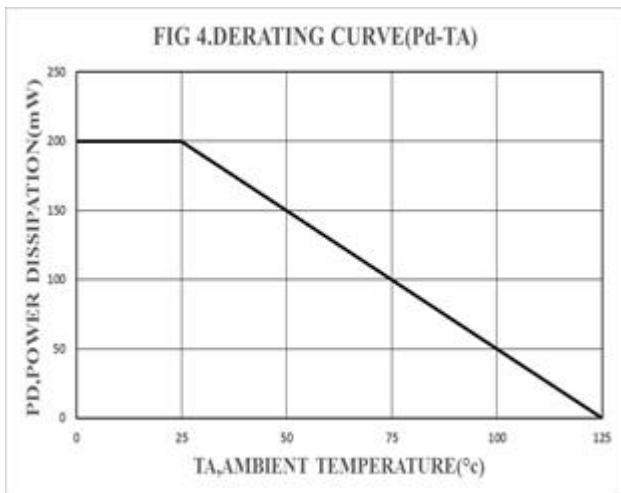
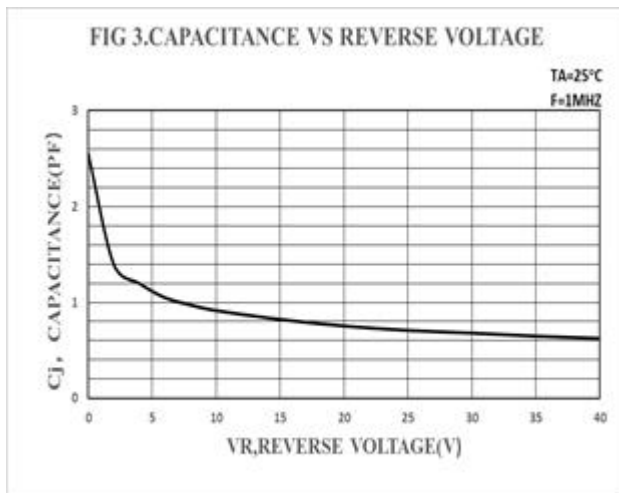
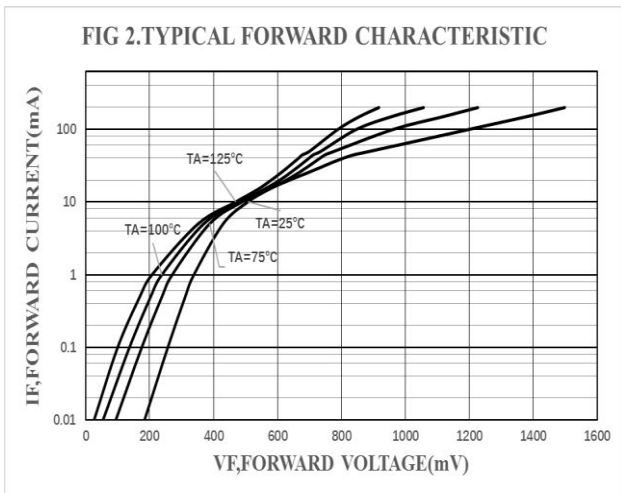
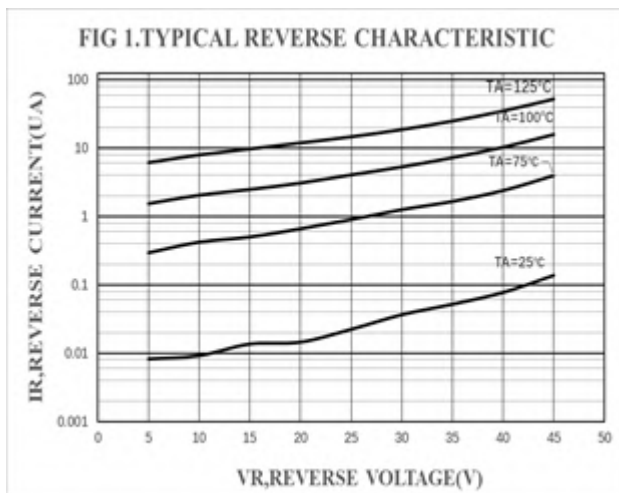
Electrical Characteristics (@ $T_A=25^{\circ}C$ unless otherwise specified)

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

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

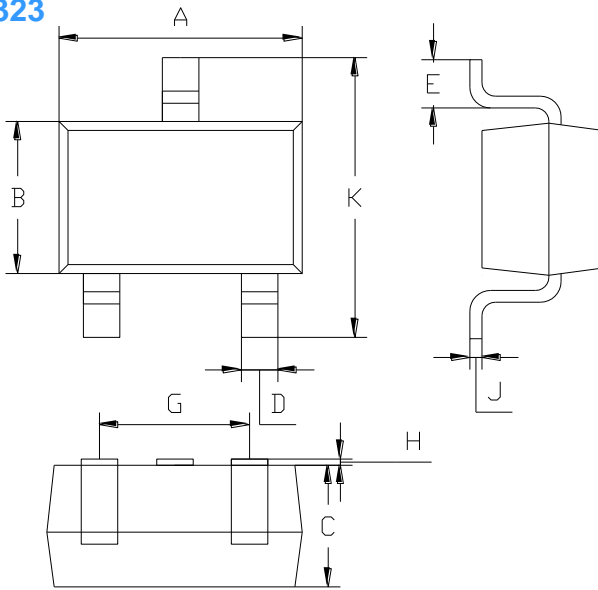
*2: pulse test, $t_p \leq 5ms$

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



Package Outline Dimensions (unit: mm)

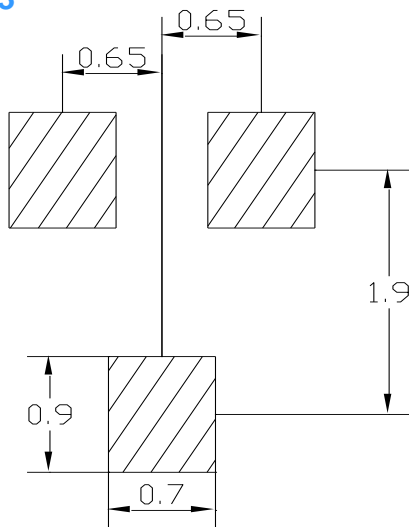
SOT-323



SOT-323		
Dim	Min	Max
A	2.00	2.20
B	1.15	1.35
C	0.90	1.10
D	0.15	0.35
E	0.25	0.40
G	1.20	1.40
H	0.02	0.10
J	0.05	0.15
K	2.20	2.40

Mounting Pad Layout (unit: mm)

SOT-323



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