

Features

- Low turn-on voltage
- Fast switching
- Ultra-small surface mount package
- PN Junction Guard Ring for Transient and ESD Protection
- Halogen free
- Qualified to AEC-Q101 standards for high reliability

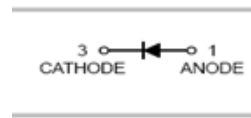
HF

Typical Applications

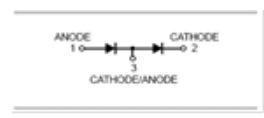
- For general purpose switching applications

Mechanical Data

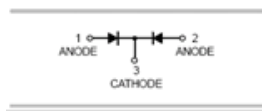
- Case: SOT-323
- Terminals: solderable per MIL-STD-202, Method 208



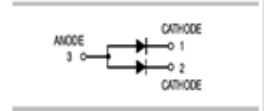
TBAS40W



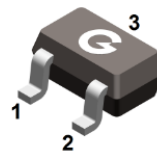
TBAS40W-04



TBAS40W-05



TBAS40W-06



SOT-323

Ordering Information

Part Number	Package	Shipping	Marking Code
TBAS40W	SOT-323	3000 pcs / Tape & Reel	43
TBAS40W-04	SOT-323	3000 pcs / Tape & Reel	44
TBAS40W-05	SOT-323	3000 pcs / Tape & Reel	45
TBAS40W-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	$^{\circ}\text{C}/\text{W}$
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
		$I_F=40\text{mA}$			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)

FIG 1.TYPICAL REVERSE CHARACTERISTIC

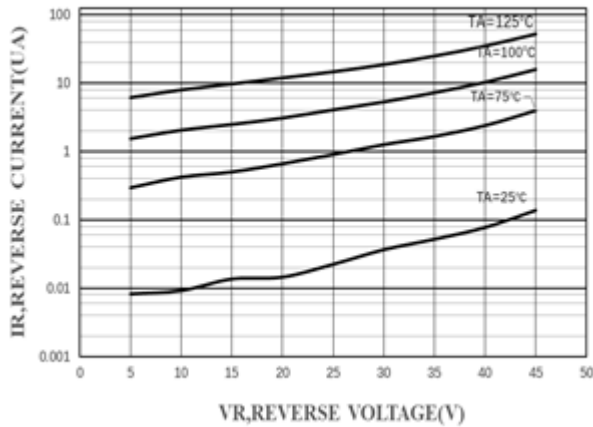


FIG 2.TYPICAL FORWARD CHARACTERISTIC

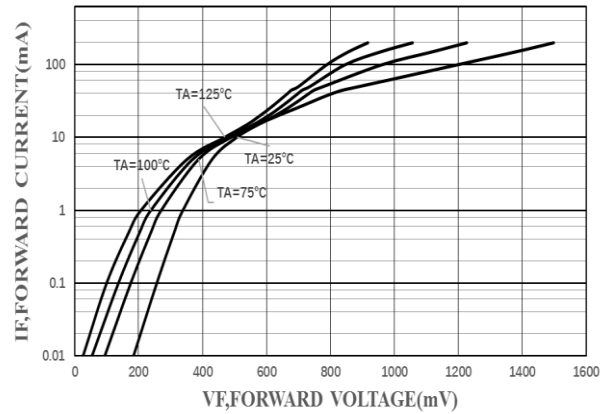


FIG 3.CAPACITANCE VS REVERSE VOLTAGE

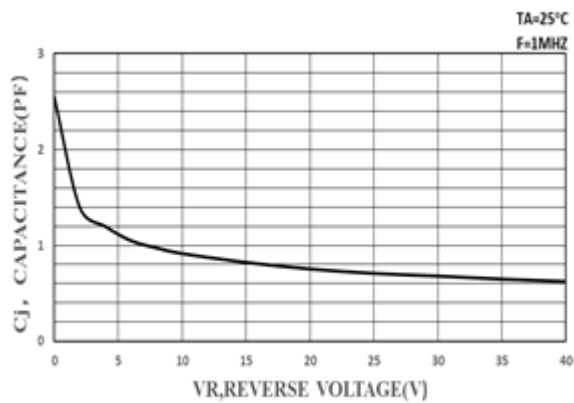
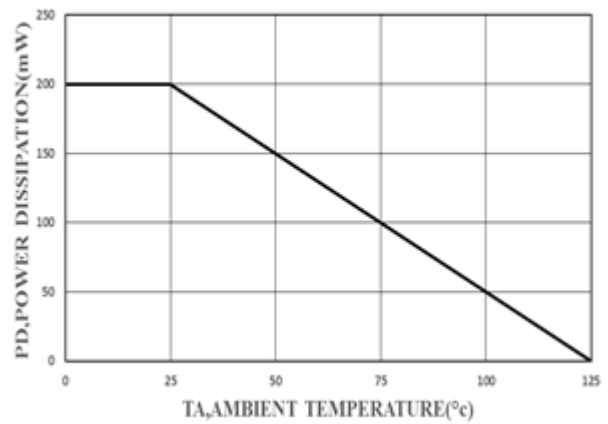
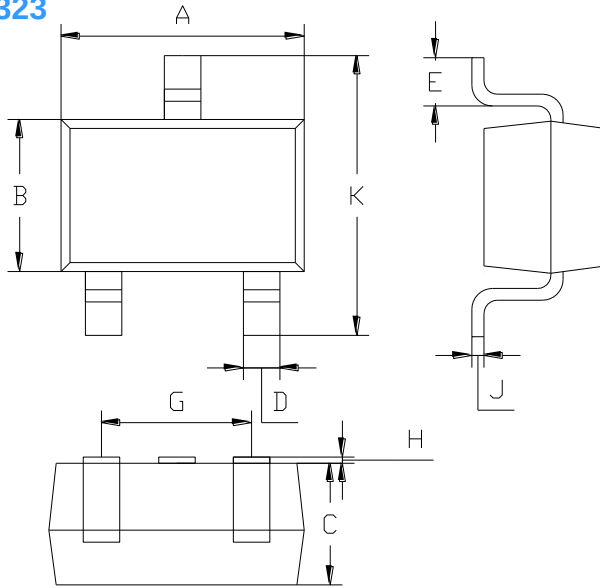


FIG 4.DERATING CURVE(P_d - T_A)



Package Outline Dimensions (unit: mm)

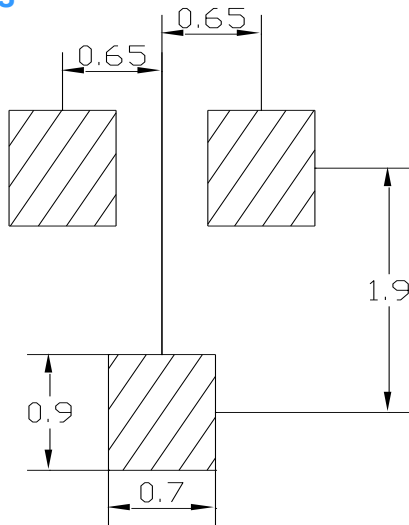
SOT-323



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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