

Features

- Low turn-on voltage
- Fast switching
- PN junction guard ring for transient and ESD protection
- Ultra-small surface mount package
- Halogen free
- Qualified to AEC-Q101 standards for high reliability

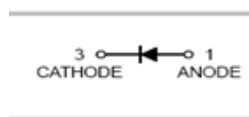
HF

Typical Applications

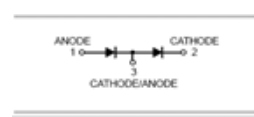
- Schottky barrier diodes

Mechanical Data

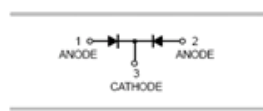
- Case: SOT-523
- Terminals: solderable per MIL-STD-202, Method 208



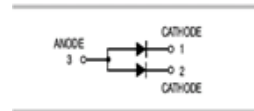
TBAS70T



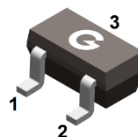
TBAS70-04T



TBAS70-05T



TBAS70-06T



SOT-523

Ordering Information

Part Number	Package	Shipping	Marking Code
TBAS70T	SOT-523	3000 pcs / Tape & Reel	7C
TBAS70-04T	SOT-523	3000 pcs / Tape & Reel	7D
TBAS70-05T	SOT-523	3000 pcs / Tape & Reel	7E
TBAS70-06T	SOT-523	3000 pcs / Tape & Reel	7F

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

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	70	V
Working Peak Reverse Voltage	V _{RWM}		
DC Reverse Voltage	V _R		
RMS Reverse Voltage	V _{R(RMS)}	49	V
Forward Continuous Current	I _F	70	mA
Non-Repetitive Peak Forward Surge Current @ t _p = 8.3ms	I _{FSM}	100	mA

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation *1	P_D	150	mW
Thermal Resistance Junction-to-Air *1	$R_{\theta JA}$	667	°C/W
Thermal Resistance Junction-to-Air *2	$R_{\theta JA}$	130	°C/W
Thermal Resistance Junction-to-Case *2	$R_{\theta JC}$	80	°C/W
Thermal Resistance Junction-to-Lead *2	$R_{\theta JL}$	90	°C/W
Operating Temperature Range	T_J	-55 ~ +125	°C
Storage Temperature Range	T_{STG}	-55 ~ +150	°C

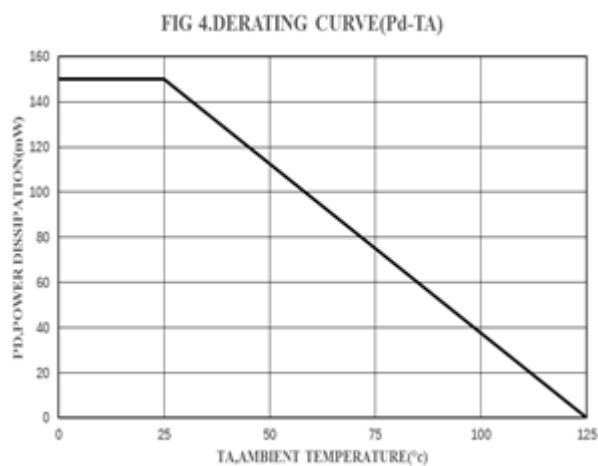
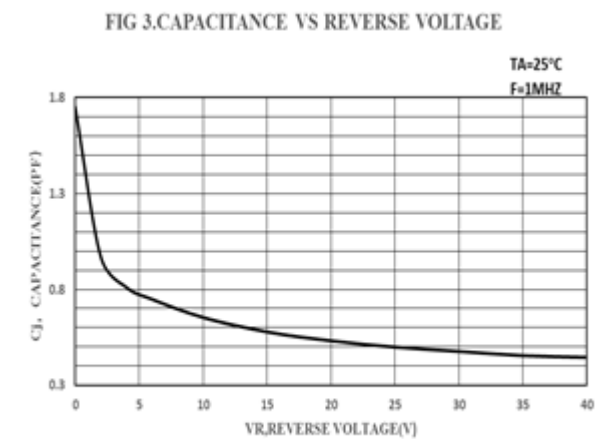
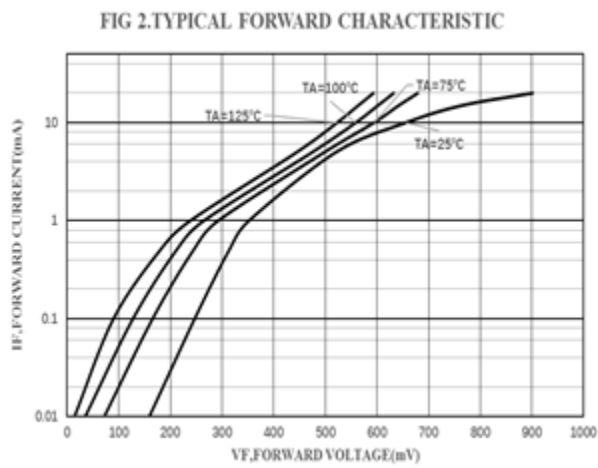
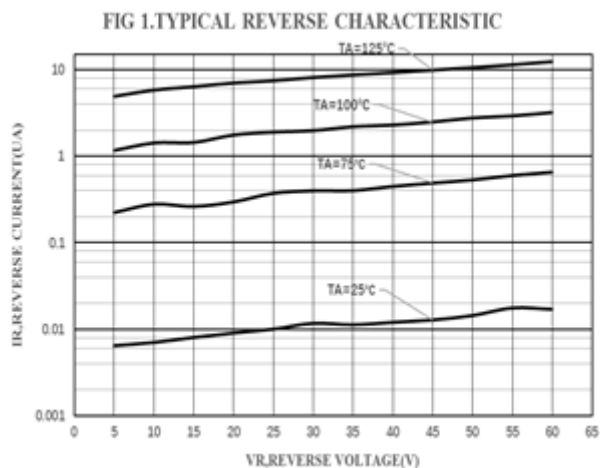
Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward Voltage *3	V_F	$I_F = 1\text{mA}$	-	-	0.41	V
		$I_F = 15\text{mA}$	-	-	1	V
Reverse Leakage Current *4	I_R	$V_R = 50\text{V}$	-	-	100	nA
Capacitance Between Terminals	C_T	$V_R = 0\text{V}$, $f = 1\text{MHz}$	-	-	2	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10\text{mA}$, $I_{rr} = 0.1 \cdot I_R$, $R_L = 100\Omega$	-	-	5	ns

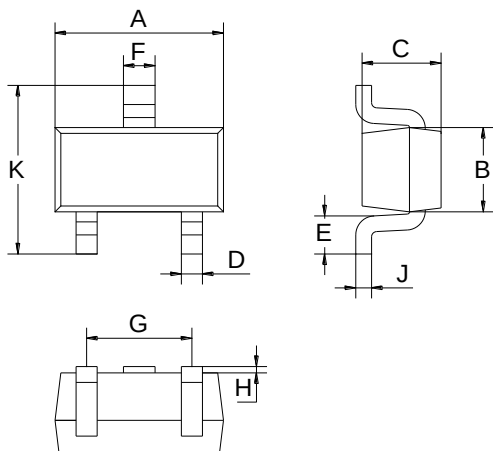
Notes:

- The data tested by surface mounted on FR-4 board with recommended pad layout
- The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper
- pulse test, $t_p \leq 300\mu\text{s}$
- pulse test, $t_p \leq 5\text{ms}$

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



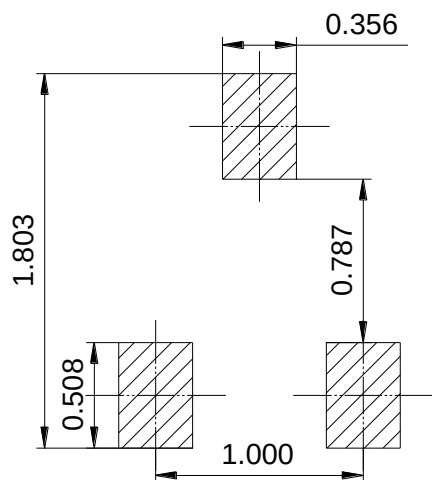
Package Outline Dimensions (Unit: mm)



SOT-523		
Dimension	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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