

Features

- Low reverse current and low forward voltage
- High reliability
- Small surface mounting type
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

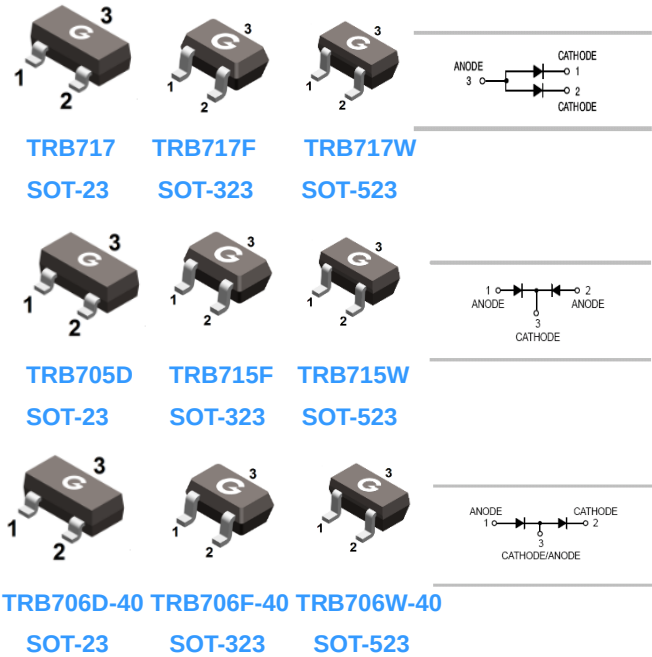
HF

Typical Applications

- Low current rectification

Mechanical Data

- Case: SOT-323, SOT-523, SOT-23
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



Ordering Information

Part Number	Package	Shipping	Marking Code
TRB717	SOT-23	3000 pcs / Tape & Reel	3C
TRB705D	SOT-23	3000 pcs / Tape & Reel	D3H
TRB706D-40	SOT-23	3000 pcs / Tape & Reel	D3J
TRB717F	SOT-323	3000 pcs / Tape & Reel	3E
TRB715F	SOT-323	3000 pcs / Tape & Reel	3D
TRB706F-40	SOT-323	3000 pcs / Tape & Reel	3J
TRB717W	SOT-523	3000 pcs / Tape & Reel	3E
TRB715W	SOT-523	3000 pcs / Tape & Reel	3D
TRB706W-40	SOT-523	3000 pcs / Tape & Reel	3J

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

Characteristic	Symbol	Value	Units
Peak Repetitive Reverse Voltage	V _{RRM}	40	V
DC Blocking Voltage	V _{DC}	40	V
Maximum Average Forward Output Current	I _{F(AV)}	30	mA
Peak Forward Surge Current, 8.3ms Single Half-sine-wave	I _{FSM}	0.2	A

Thermal Characteristics

Parameter	Symbol	TRB717 TRB705D/ TRB706D-40	TRB717F/ TRB715F/ TRB706F-40	TRB715W/ TRB715W/ TRB706W-40	Units
Power Dissipation	P _D	300	200	150	mW
Typical Thermal Resistance Per Leg	R _{ΘJA} *	334	500	667	°C /W
Operating Junction Temperature Range	T _J	-40 ~ +125			°C
Storage Temperature Range	T _{STG}	-40 ~ +150			°C
* Part mounted on FR-4 board with recommended pad layout					

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

Parameter	Symbol	Test conditions	Min.	Typ.	Max.	Units
Forward Voltage	V_F^*	$I_F = 1\text{mA}$	-	-	0.37	V
Maximum Peak Reverse Current	I_R^{**}	$V_R = 30\text{V}$	-	-	0.5	μA
Capacitance Between Terminals	C_T	$V_R = 1\text{V}$, $f = 1\text{MHz}$	-	1.2	-	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 30\text{mA}$ $I_{rr} = 0.1 \times I_R$, $R_L = 100\Omega$	-	5	-	ns
*Pulse width $\leq 380\mu\text{s}$, Duty cycle $< 2\%$						
**pulse test, $t_p \leq 5\text{ms}$						

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

FIG 1.TYPICAL REVERSE CHARACTERISTIC

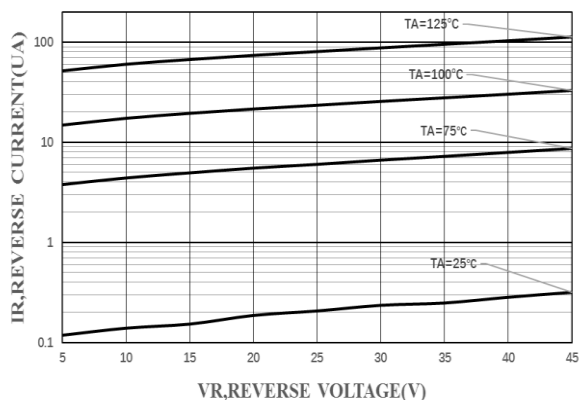


FIG 2.TYPICAL FORWARD CHARACTERISTIC

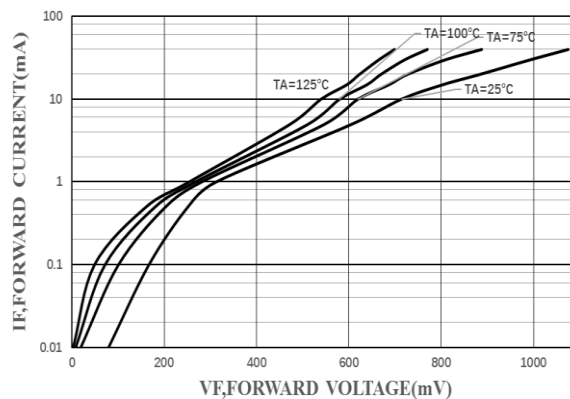


FIG 3.CAPACITANCE VS REVERSE VOLTAGE

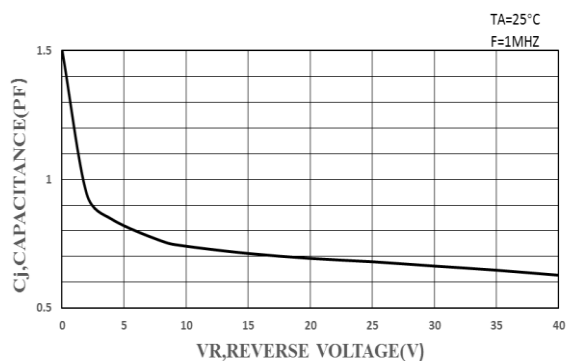
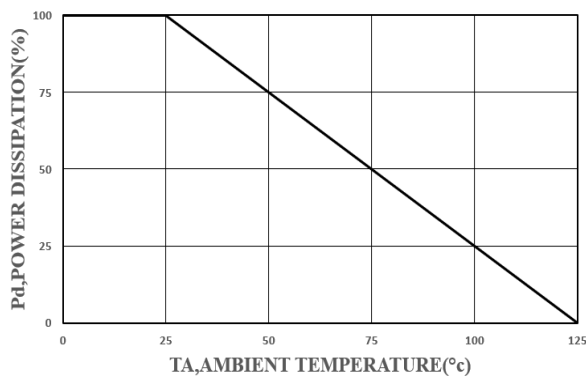
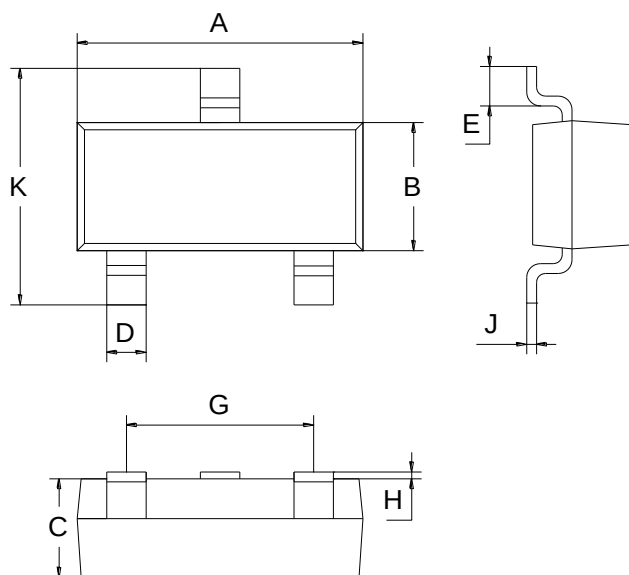


FIG 4.DERATING CURVE(P_d - T_A)



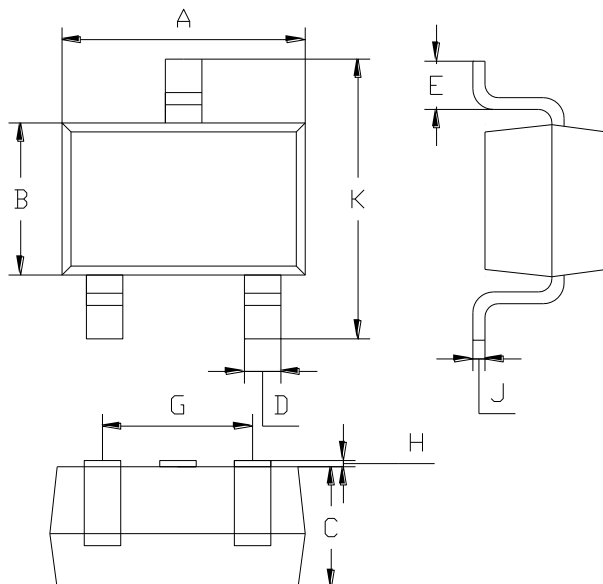
Package Outline Dimensions (unit: mm)

SOT-23



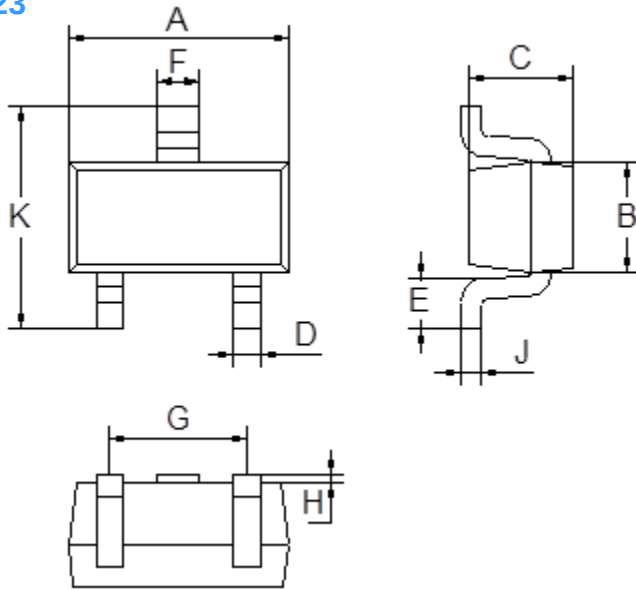
SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60

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

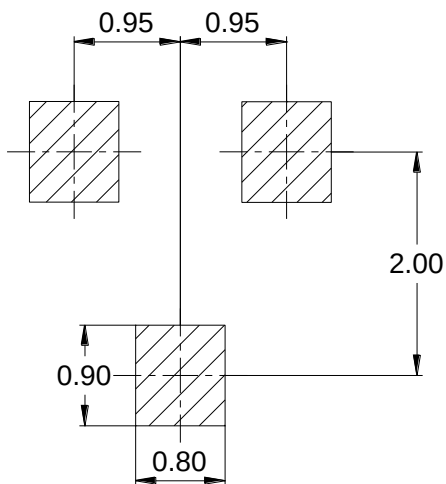
SOT-523



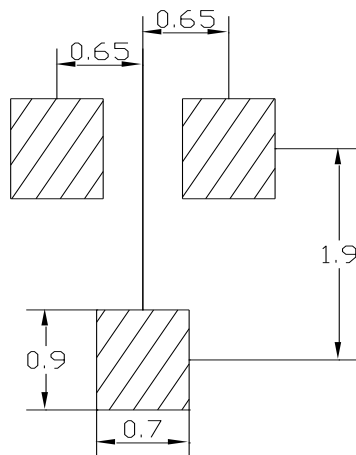
SOT-523		
Dim	Min	Max
A	1.50	1.70
B	0.75	0.85
C	0.60	0.80
D	0.15	0.30
E	0.30	0.40
F	0.25	0.40
G	0.90	1.10
H	0.02	0.10
J	0.08	0.18
K	1.45	1.75

Mounting Pad Layout (unit: mm)

SOT-23



SOT-323



SOT-523

