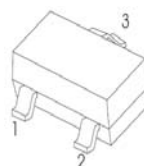
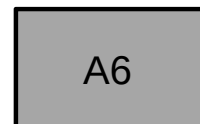
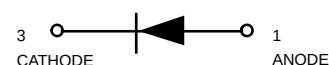


FEATURES

- We declare that the material of product compliance with RoHS requirements and Halogen Free.



SOT-23



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Limits	Unit
Continuous Reverse Voltage	VR	75	V
Peak Forward Current	IF	200	mA
Peak Forward Surge Current	IFSM	500	mA

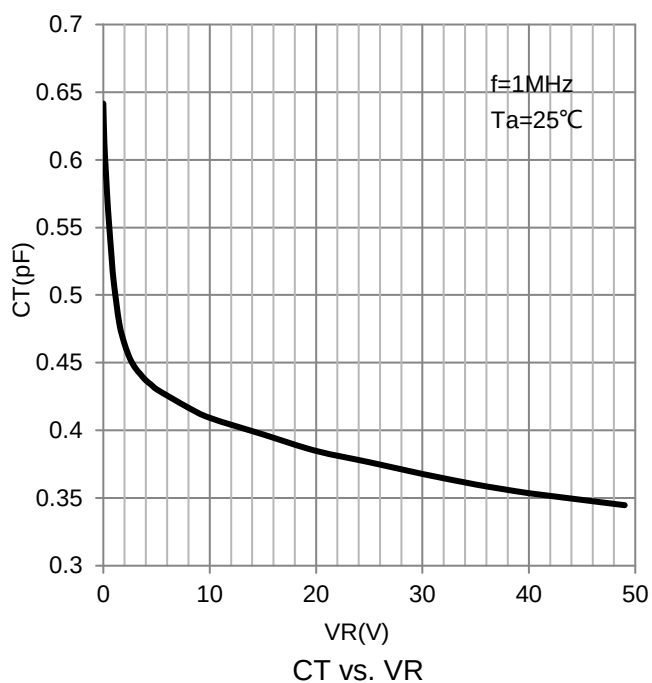
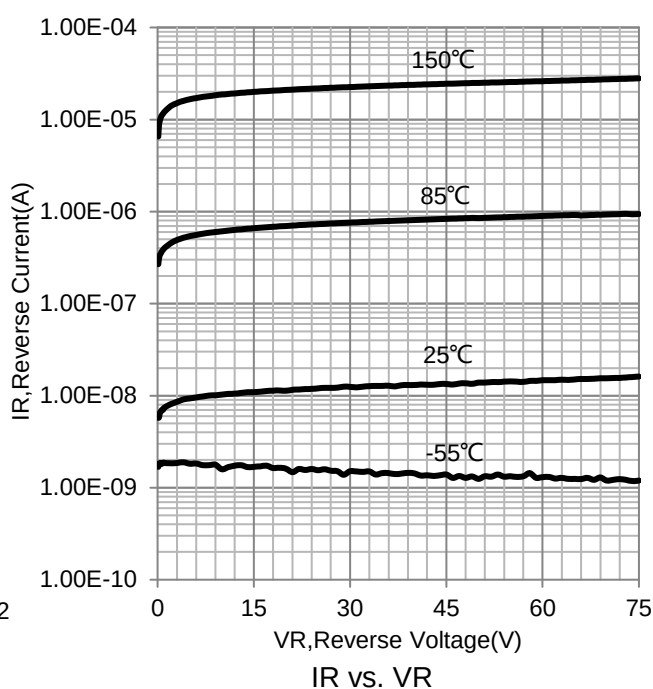
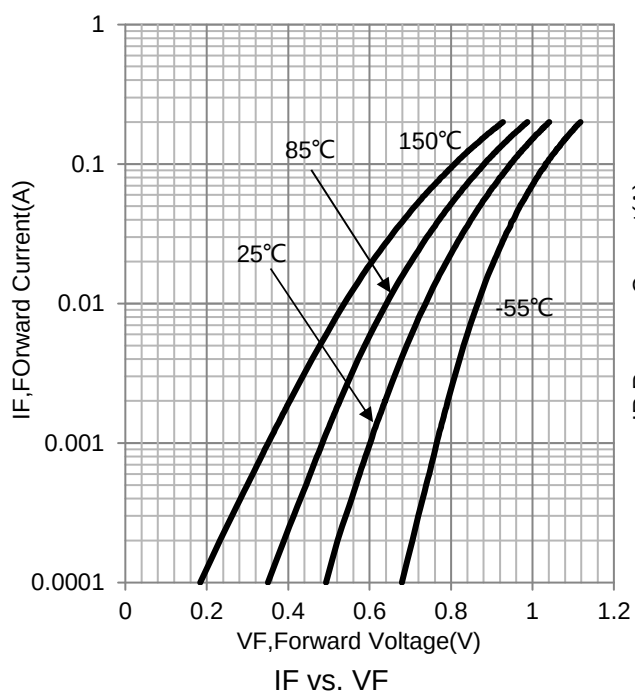
THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Total Device Dissipation FR-5 Board, (Note 1) $T_A = 25^\circ\text{C}$	PD	225	mW
Derate above 25°C		1.8	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	R θ JA	556	$^\circ\text{C}/\text{W}$
Total Device Dissipation Alumina Substrate, (Note 2) $T_A = 25^\circ\text{C}$	PD	300	mW
Derate above 25°C		2.4	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	R θ JA	417	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature	TJ , Tstg	-55~+150	$^\circ\text{C}$

Characteristics ($T_a = 25^\circ\text{C}$)

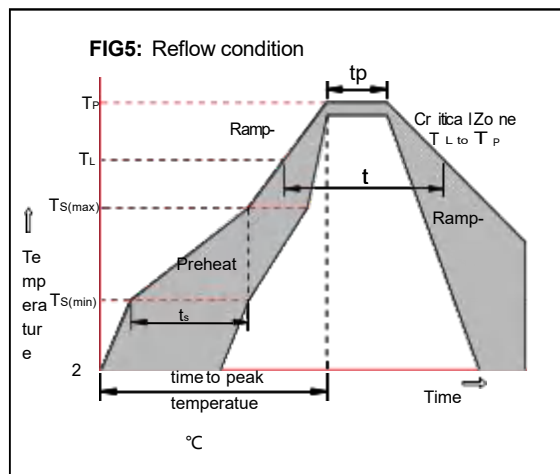
CHARACTERISTICS	Symbol	Min	Max	Unit
Reverse Voltage Leakage Current ($V_R=75\text{V}$) ($V_R=75\text{V}$, $T_J = 150^\circ\text{C}$) ($V_R=25\text{V}$, $T_J = 150^\circ\text{C}$)	I_R	- - -	1 50 30	μA
Reverse Breakdown Voltage ($I_{BR} = 100 \mu\text{A}$)	V_{BR}	75	-	V
Forward voltage ($I_F = 1\text{mA}$) ($I_F = 10\text{mA}$) ($I_F = 50\text{mA}$) ($I_F = 150\text{mA}$)	V_F	- - - -	715 855 1000 1250	mV
Diode capacitance ($f=1\text{MHz}$, $V_R = 0$)	C_d	-	2	pF
Forward Recovery Voltage ($I_F = 10 \text{ mA}$, $t_r = 20\text{ns}$)	V_{FR}	-	1.75	V
Reverse Recovery Time ($I_F = I_R = 10\text{mA}$, $R_L = 50 \Omega$)	T_{rr}	-	6	nS
Stored Charge ($I_F = 10 \text{ mA}$ to $V_R = 5.0\text{V}$, $R_L = 500 \Omega$)	Q_S	-	45	pC

RATING AND CHARACTERISTIC CURVES



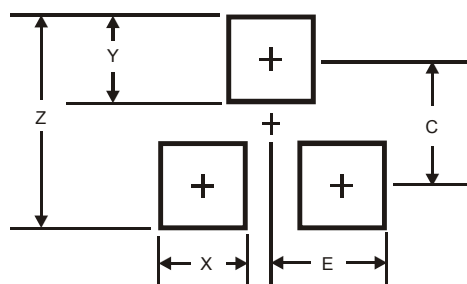
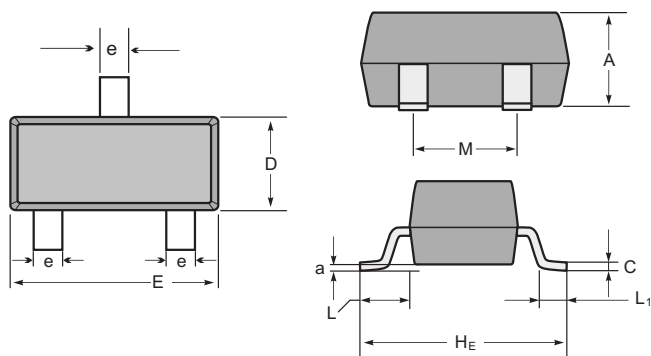
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_P)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260°C



Package Dimensions & Suggested Pad Layout

SOT23



SOT-23 mechanical data

UNIT	A	C	D	E	H _E	e	M	L	L ₁	a
mm	max	1.1	0.15	1.4	3.0	2.6	0.5	1.95	0.55 (ref)	0.0
	min	0.9	0.08	1.2	2.8	2.2	0.3	1.7	0.36 (ref)	0.15
mil	max	43	6	55	118	102	20	77	22 (ref)	0.0
	min	35	3	47	110	87	12	67	14 (ref)	6

Dimensions	SOT23
Z	2.9
X	0.8
Y	0.9
C	2.0
E	1.35

Tape & reel specification

Technical drawing of a tape component. The top view shows a series of rectangular components with circular features, labeled with dimensions P0, P2, P1, ØD0, and ØD1. The side view shows the profile of the tape with dimensions E, F, W, B0, K0, and T. The cross-sectional view (SECTION: A-A) shows the internal structure with dimension A0. The label 'Tape' is present in the top left corner.

Symbol	Dimension (mm)
P0	4.00±0.10
P1	4.00±0.10
P2	2.00±0.10
D0	1.55±0.10
D1	1.05±0.10
E	1.55±0.10
F	3.60±0.10
W	8.00±0.10
A0	3.80±0.20
B0	3.25±0.20
K0	1.45±0.10
T	0.25±0.05
D2	178.0±3.0
D3	55Min.
D4	R24.0±3.0
G	R82.0±3.0
I	13.0±2.0
W1	11.0±3.0

Technical drawing of a 7 inch Reel. The top view shows a circular reel with a central hub and dimensions G, D4, and D3. The side view shows the profile of the reel with dimensions D2, D3, and W1. The label '7 inch Reel' is present in the top left corner.

Quantity: 3000PCS