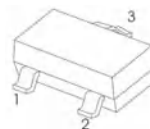


FEATURES

Low Leakage
High Conductance

SOT-23



1.BASE
2.EMITTER
3.COLLECTOR

A13

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

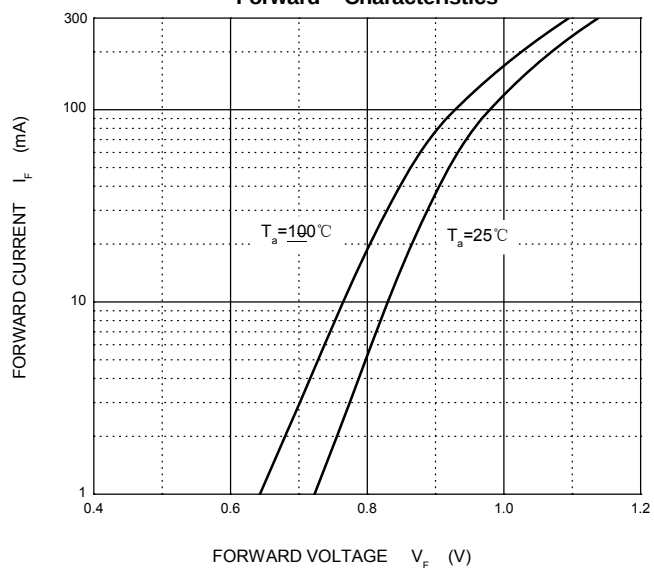
Symbol	Parameter	Value	Unit
V_R	DC Blocking Voltage	200	V
I_O	Continuous Forward Current	200	mA
I_{FM}	Peak Forward Current	700	mA
I_{FSM}	Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	2.0	A
P_D	Power Dissipation	350	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	357	$^{\circ}\text{C/W}$
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted.)

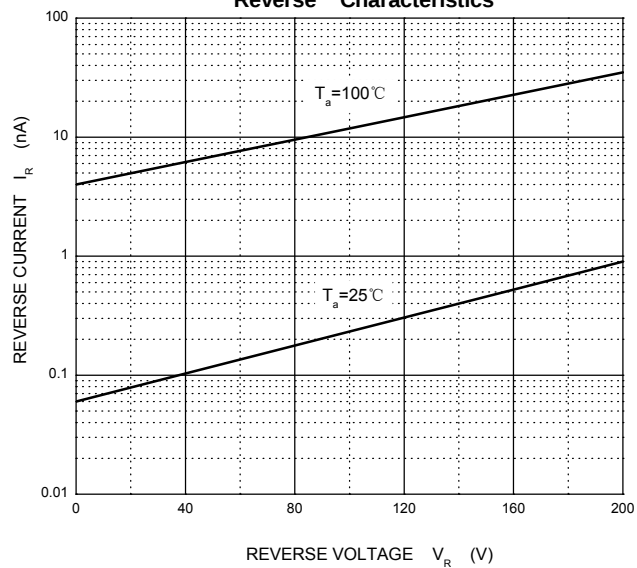
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=5\mu A$	200			V
Reverse current	I_R	$V_R=180V$			10	nA
Forward voltage	V_F	$I_F=1mA$			0.75	V
		$I_F=10mA$			0.85	
		$I_F=50mA$			0.95	
		$I_F=100mA$			1.1	
		$I_F=200mA$			1.3	
		$I_F=300mA$			1.5	
Total capacitance	C_{tot}	$V_R=0V, f=1MHz$			4	pF

RATING AND CHARACTERISTIC CURVES

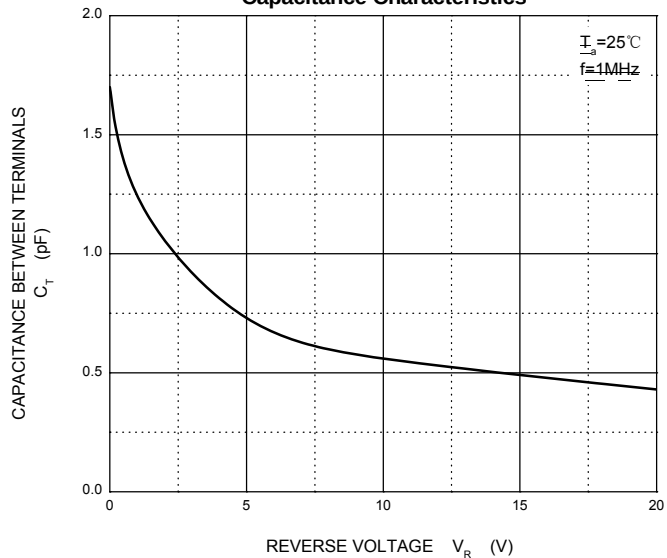
Forward Characteristics



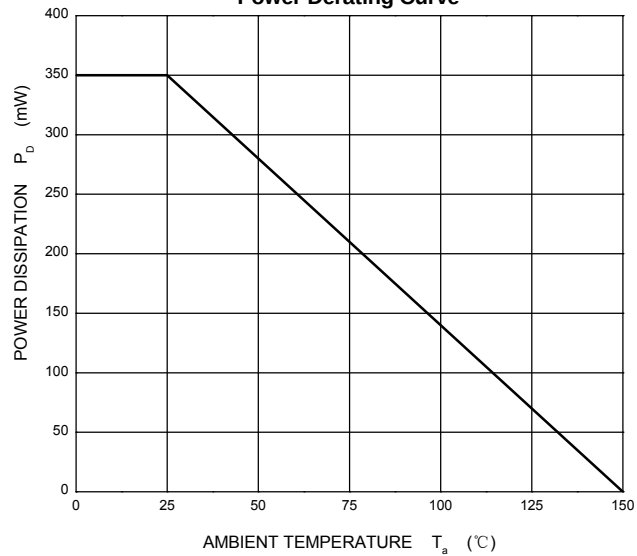
Reverse Characteristics



Capacitance Characteristics

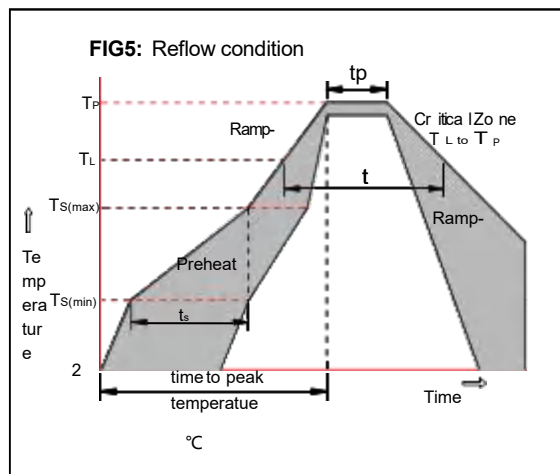


Power Derating Curve



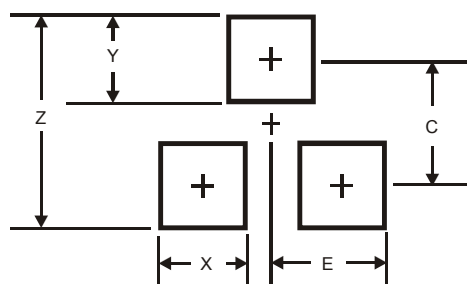
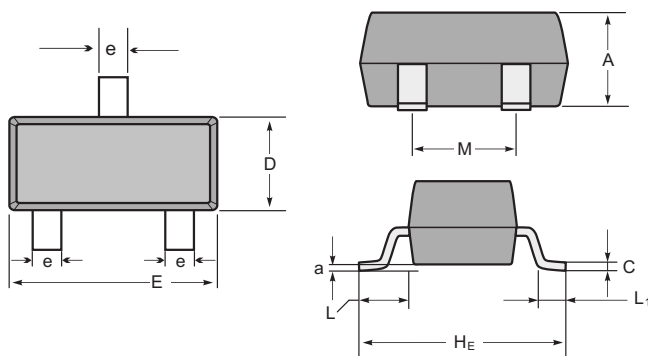
Soldering parameters

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

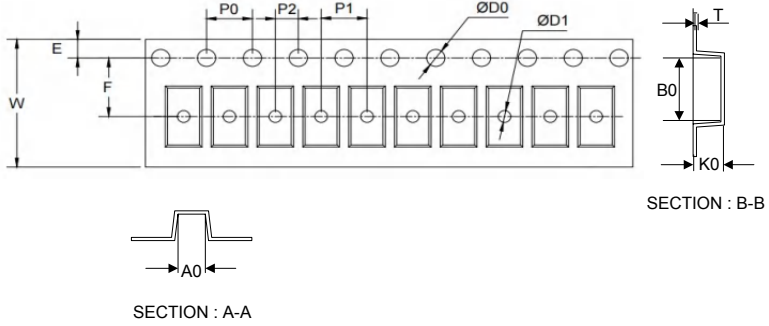
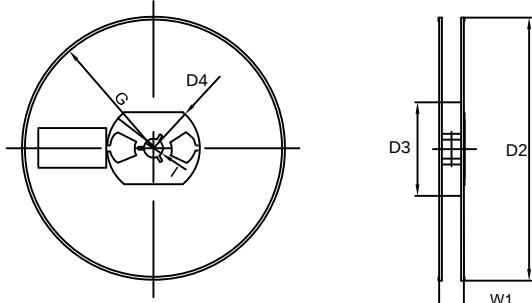


SOT-23 mechanical data

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)	0.36 (ref)
	min	0.9	0.08	1.2	2.8	2.2	0.3	1.7		0.15
mil	max	43	6	55	118	102	20	77	22 (ref)	14 (ref)
	min	35	3	47	110	87	12	67		6

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

Tape & reel specification

Tape  SECTION : A-A SECTION : B-B	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.
7" Reel 	D4	R24.0±3.0
	G	R82.0±3.0
	I	13.0±2.0
	W1	11.0±3.0
	Quantity: 3000PCS	