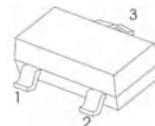


FEATURES

NPN Low equivalent on-resistance 低等效电阻

SOT-23



1.BASE
2.EMITTER
3.COLLECTOR

619

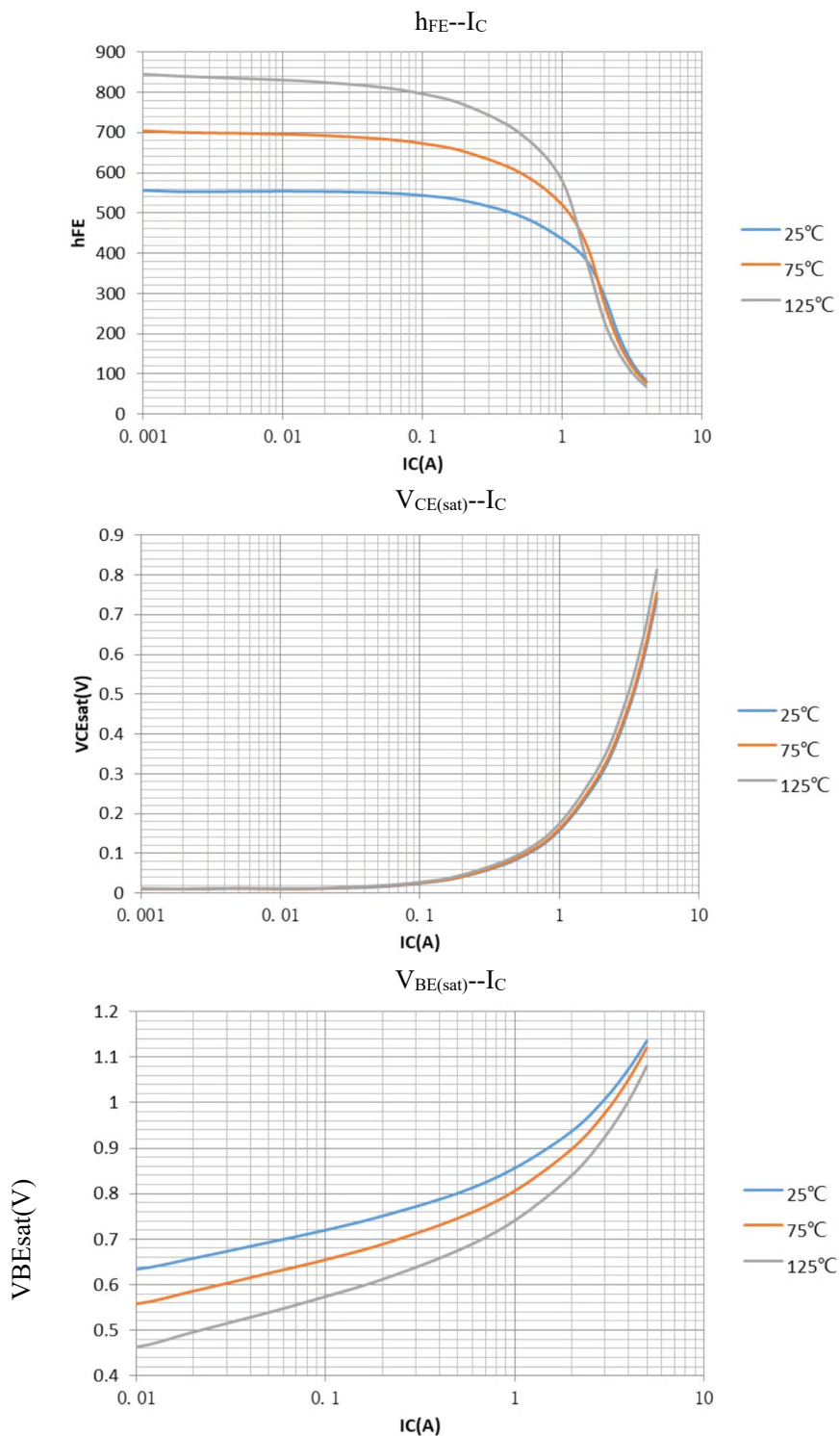
Absolute Maximum Ratings 最大额定值

Characteristic 特性参数	Symbol 符号	Rat 额定值	Unit 单位
Collector-Base Voltage 集电极基极电压	V_{CBO}	50	V
Collector-Emitter Voltage 集电极发射极电压	V_{CEO}	50	V
Emitter-Base Voltage 发射极基极电压	V_{EBO}	5	V
Collector Current 集电极电流	I_C	2000	mA
Power dissipation 耗散功率	$P_C(T_a=25^{\circ}\text{C})$	250	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	500	$^{\circ}\text{C}/\text{W}$
Junction and Storage Temperature 结温和储藏温度	T_J, T_{stg}	-55to+150 $^{\circ}\text{C}$	

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

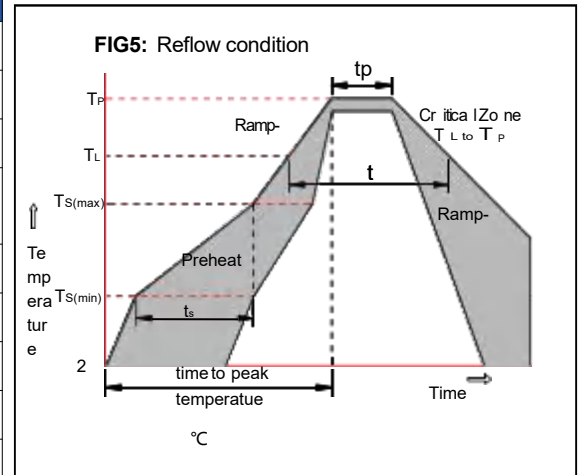
Characteristic 特性参数	Symbol 符号	Min 最小值	Type 典型值	Max 最大值	Unit 单位
Collector-Base Breakdown Voltage 集电极基极击穿电压(I _C = 100μA, I _E =0)	BV _{CBO}	50	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压(I _C = 10mA, I _B =0)	BV _{CEO}	50	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压(I _E = 100μA, I _C =0)	BV _{EBO}	5	—	—	V
Collector-Base Leakage Current 集电极基极漏电流(V _{CB} = 30V, I _E =0)	I _{CBO}	—	—	1	μA
Collector-Emitter Leakage Current 集电极发射极漏电流(V _{CE} =30V, V _{BE} = -0.5V)	I _{CEX}	—	—	1	μA
Emitter-Base Leakage Current 发射极基极漏电流(V _{EB} = 5V, I _C =0)	I _{EBO}	—	—	1	μA
DC Current Gain(V _{CE} = 2V, I _C = 200mA) 直流电流增益(V _{CE} = 2V, I _C = 2000mA)	H _{FE}	300 150	—	500	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降 (I _C = 1500mA, I _B = 50mA) (I _C = 2500mA, I _B = 150mA)	V _{CE(sat)}	—	—	0.25 0.35	V
Base-Emitter Saturation Voltage 基极发射极饱和压降 (I _C = 2000mA, I _B = 100mA)	V _{BE(sat)}	—	—	1.1	V
Transition Frequency 特征频率(V _{CE} = 10V, I _C = 50mA)	f _T	150	—	—	MHz

RATING AND CHARACTERISTIC CURVES



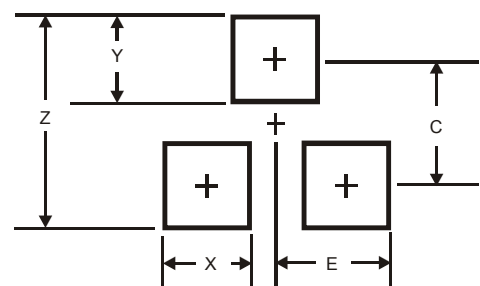
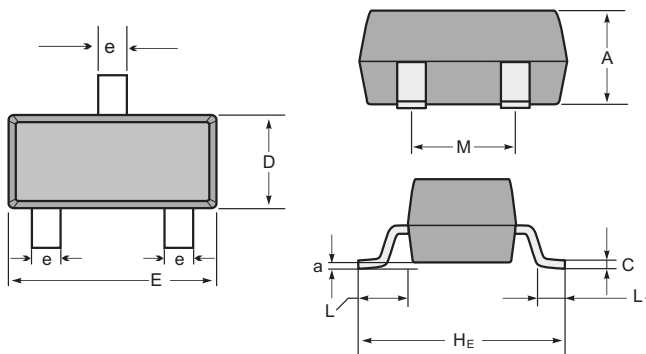
Soldering parameters

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



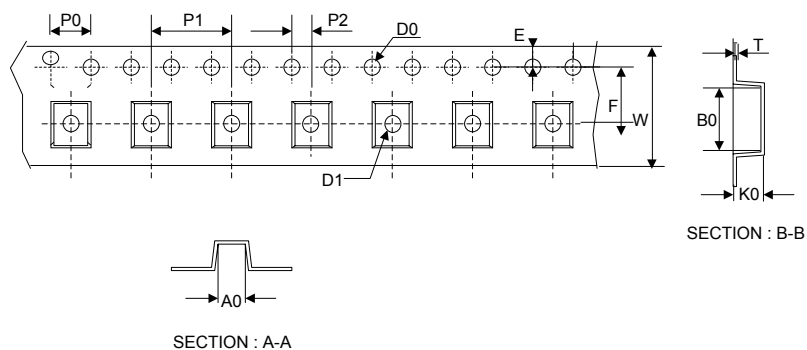
SOT-23 mechanical data

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)	0.36 (ref)	0.0
	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)	0.0
	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



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
Quantity: 3000PCS	

7" Reel

