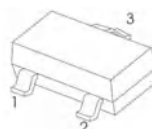


FEATURES

NPN High Frequency

SOT-23



3EM

1.BASE
2.EMITTER
3.COLLECTOR

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Absolute Maximum Rating (Ta=25°C)

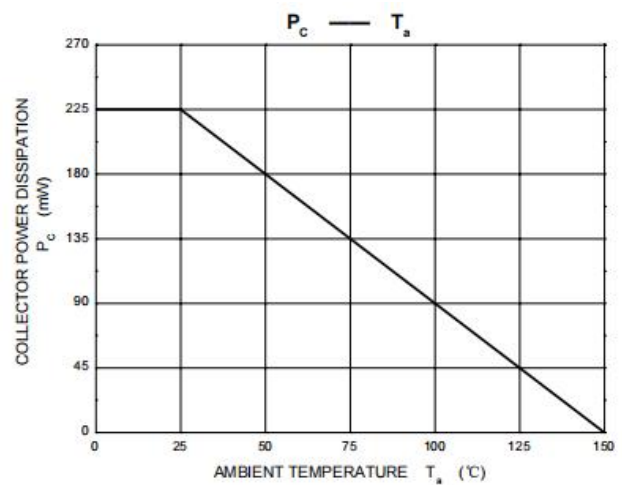
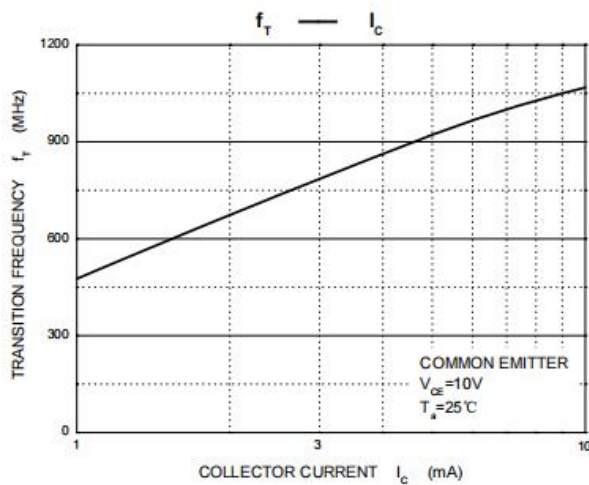
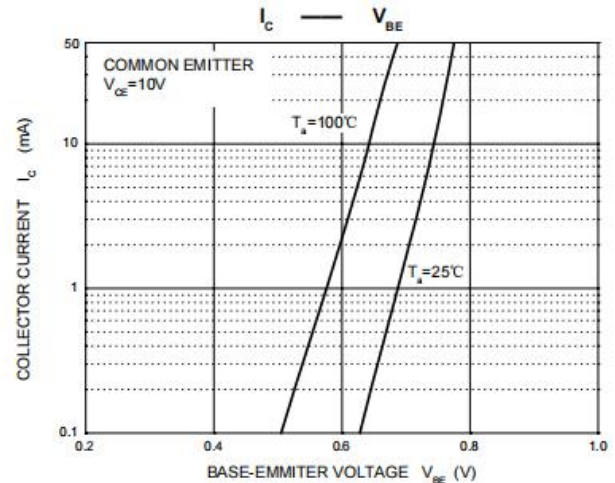
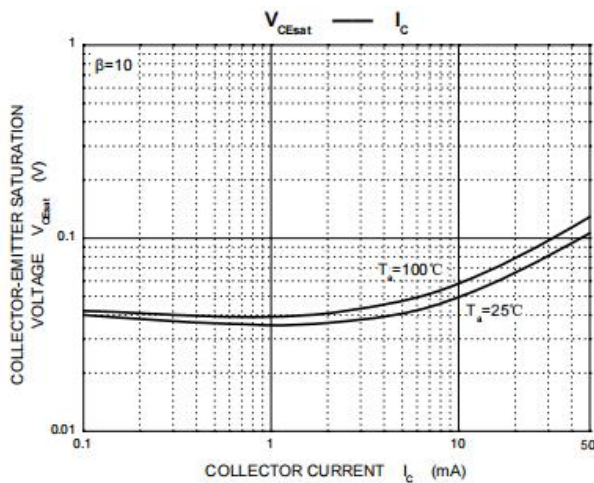
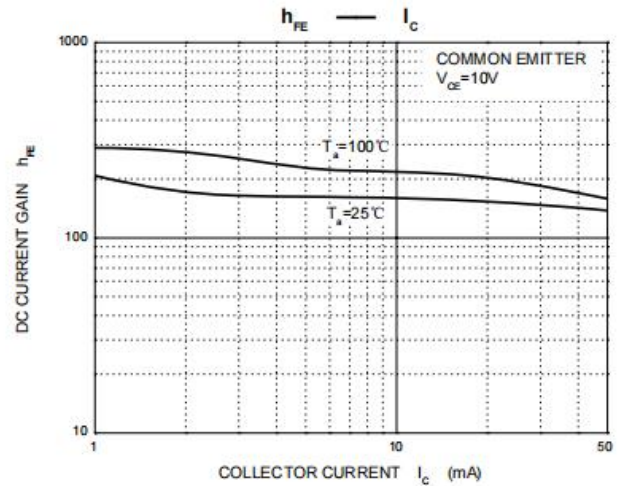
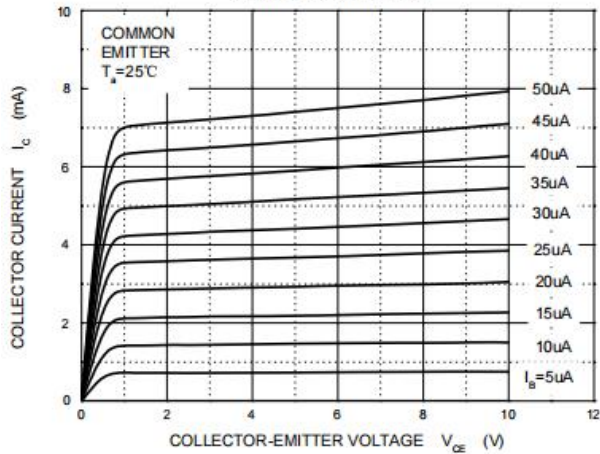
Characteristic 特性参数	Symbol 符号	Rat 额定值	Unit 单位
Collector-Base Voltage 集电极基极电压	V_{CBO}	30	V
Collector-Emitter Voltage 集电极发射极电压	V_{CEO}	25	V
Emitter-Base Voltage 发射极基极电压	V_{EBO}	3	V
Collector Current 集电极电流	I_C	50	mA
Power dissipation 耗散功率	$P_C(T_a=25^{\circ}C)$	225	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	556	°C/W
Junction and Storage Temperature 结温和储藏温度	T_J, T_{stg}	-55to+150°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 (IC=100μA, IE=0)	BV _{CBO}	30	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压 (IC=1mA, IB=0)	BV _{CEO}	25	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压 (IE=10μA, IC=0)	BV _{EBO}	3	—	—	V
Collector-Base Leakage Current 集电极基极漏电流 (V _{CB} =25V, IE=0)	I _{CBO}	—	—	100	nA
Collector-Emitter Leakage Current 集电极发射极漏电流 (V _{CE} =20V, IE=0)	I _{CEO}	—	—	100	nA
Emitter-Base Leakage Current 发射极基极漏电流 (V _{EB} =2V, IC=0)	I _{EBO}	—	—	100	nA
DC Current Gain 直流电流增益 (V _{CE} =10V, IC=4mA)	H _{FE}	100	—	200	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降 (IC=4mA, IB=0.4mA)	V _{CE(sat)}	—	—	0.5	V
Base-Emitter Saturation Voltage 基极发射极导通压降 (V _{CE} =10V, IC=4mA)	V _{BE(on)}	—	—	0.95	V
Transition Frequency 特征频率 (V _{CE} =10V, IC=4mA)	f _T	650	—	—	MHz
Output Capacitance 输出电容 (V _{CB} =10V, IE=0, f=1MHz)	C _{ob}	—	—	0.7	pF

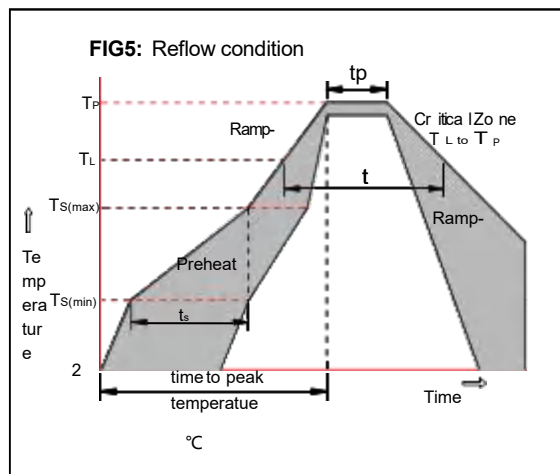
RATING AND CHARACTERISTIC CURVES

Static Characteristic



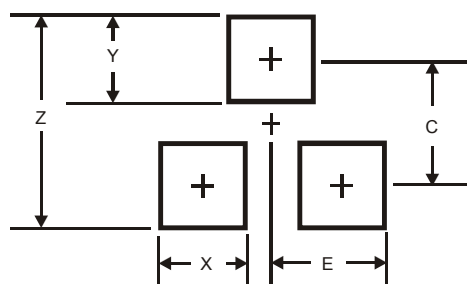
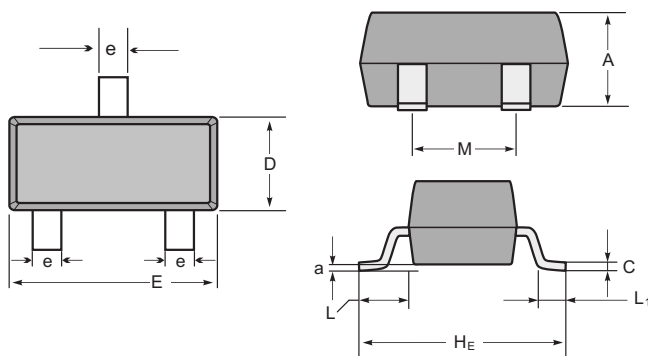
Soldering parameters

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

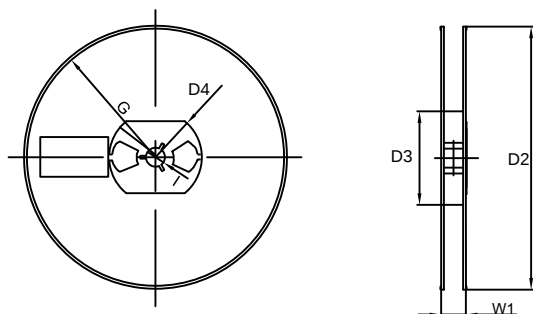


SOT-23 mechanical data

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

Quantity: 3000PCS