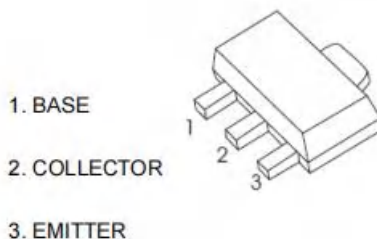


FEATURES

NPN Power Amplifier



Y1

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Absolute Maximum Rating ($T_C=25^{\circ}\text{C}$ unless otherwise noted)

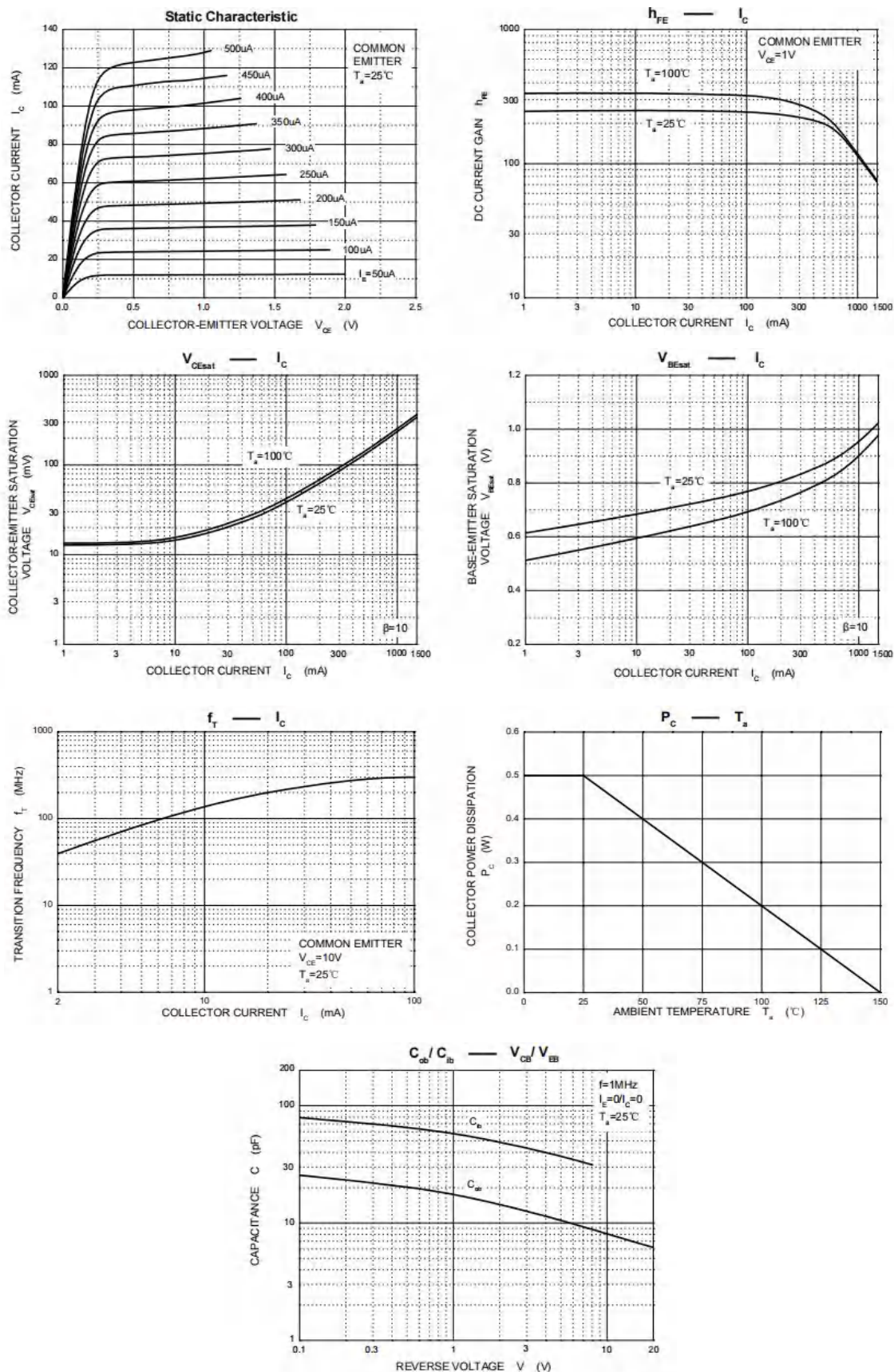
Characteristic 特性参数	Symbol 符号	Rat 额定值	Unit 单位
Collector-Base Voltage 集电极基极电压	V_{CBO}	40	V
Collector-Emitter Voltage 集电极发射极电压	V_{CEO}	25	V
Emitter-Base Voltage 发射极基极电压	V_{EBO}	5	V
Collector Current 集电极电流	I_C	1500	mA
Power dissipation 耗散功率	$P_C(T_a=25^{\circ}\text{C})$	500	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	250	$^{\circ}\text{C}/\text{W}$
Junction and Storage Temperature 结温和储藏温度	T_J, T_{stg}	-55to+150 $^{\circ}\text{C}$	

ELECTRICAL CHARACTERISTICS

($T_A=25^{\circ}\text{C}$ unless otherwise noted 如无特殊说明, 温度为 25°C)

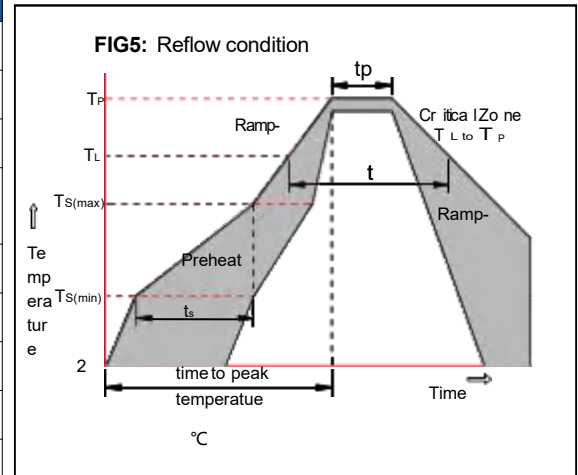
Characteristic 特性参数	Symbol 符号	Min 最小值	Type 典型值	Max 最大值	Unit 单位
Collector-Base Breakdown Voltage 集电极基极击穿电压($I_C=100\mu\text{A}$, $I_E=0$)	BV_{CBO}	40	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压($I_C=1\text{mA}$, $I_B=0$)	BV_{CEO}	25	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压($I_E=100\mu\text{A}$, $I_C=0$)	BV_{EBO}	5	—	—	V
Collector-Base Leakage Current 集电极基极漏电流($V_{CB}=40\text{V}$, $I_E=0$)	I_{CBO}	—	—	100	nA
Collector-Emitter Punch Throng Current 集电极发射极穿透电流($V_{CE}=20\text{V}$, $V_{BE}=0$)	I_{CES}	—	—	100	nA
Emitter-Base Leakage Current 发射极基极漏电流($V_{EB}=5\text{V}$, $I_C=0$)	I_{EBO}	—	—	100	nA
DC Current Gain 直流电流增益($V_{CE}=1\text{V}$, $I_C=100\text{mA}$)	$H_{FE} (1)$	85	—	400	
DC Current Gain 直流电流增益($V_{CE}=1\text{V}$, $I_C=800\text{mA}$)	$H_{FE} (2)$	40	—	—	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降 ($I_C=800\text{mA}$, $I_B=80\text{mA}$)	$V_{CE(sat)}$	—	—	0.5	V
Base-Emitter Saturation Voltage 基极发射极饱和压降 ($I_C=800\text{mA}$, $I_B=80\text{mA}$)	$V_{BE(sat)}$	—	—	1.2	V
Transition Frequency 特征频率($V_{CE}=10\text{V}$, $I_C=50\text{mA}$)	f_T	100	—	—	MHz
Output Capacitance 输出电容($V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$)	C_{ob}	—	13	—	pF

RATING AND CHARACTERISTIC CURVES



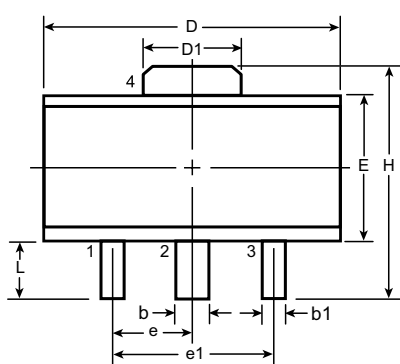
Soldering parameters

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

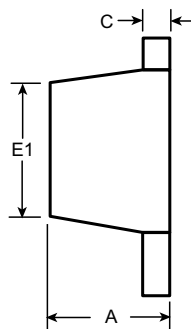


Package Dimensions & Suggested Pad Layout

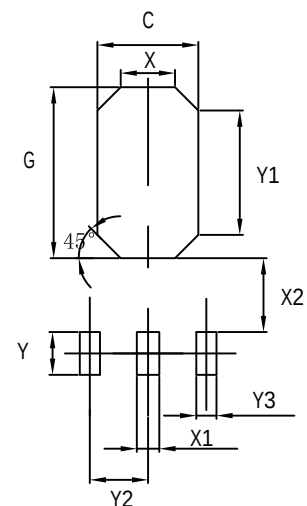
SOT89



Top View



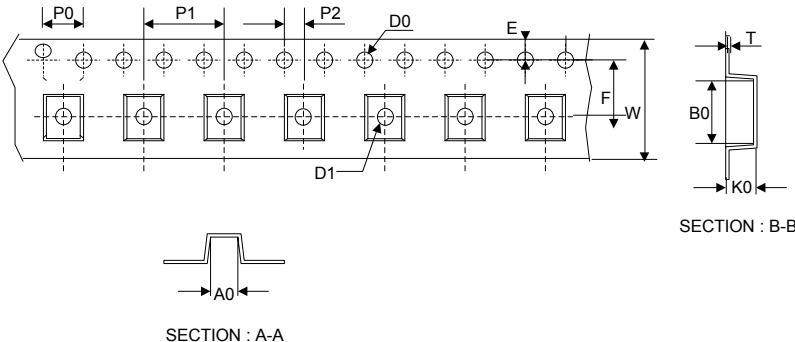
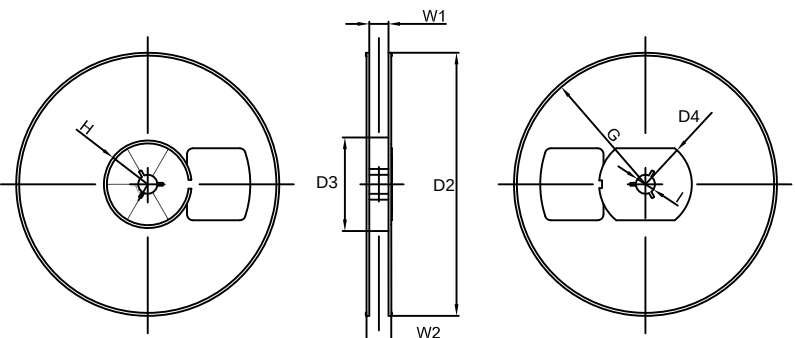
Side View



Symbol	A	b	b1	C	D	D1	E	E1	e	e1	H	L	
Dimensions (mm)	MIN	1.40	0.44	0.36	0.3	4.40	1.50	2.29	2.00 [†]	1.50 BSC	3.00 BSC	3.94	0.89
	NOM	-	-	-	-	-	-	-	-			-	-
	MAX	1.60	0.56	0.48	0.5	4.60	1.75	2.60	2.29			4.25	1.20

Dimensions	Value (in mm)
C	2.50
G	3.60
X	1.40
X1	0.90
X2	0.90
Y	1.40
Y1	2.60
Y2	1.50
Y3	0.90

Tape & reel specification

Tape		Symbol	Dimension (mm)
		P0	4.00±0.20
		P1	8.00±0.20
		P2	2.00±0.20
		D0	1.60±0.20
		D1	1.60±0.20
		E	1.75±0.20
		F	7.50±0.15
		W	16.00±0.20
		A0	6.30±0.20
		B0	8.25±0.20
		K0	2.60±0.20
		T	0.23±0.10
13" Reel		D2	180.0±5.0
		D3	60Min.
		D4	R32.0±2.0
		G	R86.5±2.0
		H	R30.0±2.0
		I	13.0±2.0
		W1	13.20±2.0
		W2	16.50±2.0
		Quantity: 1000PCS	