

型号：MMBT2222 1P

NPN

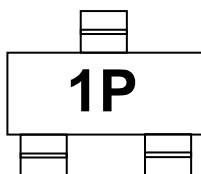
主要特性/Features

噪声低，放大线性好 Low noise, good amplification linearity

应用/Application

用于一般放大电路，与MMBT2907A互补 For general amplification circuit, complementary to MMBT2907A

印字/MARKING 等效电路/Equivalent Circuit



极限参数/Absolute Maximum Ratings(TA=25°C unless otherwise noted)

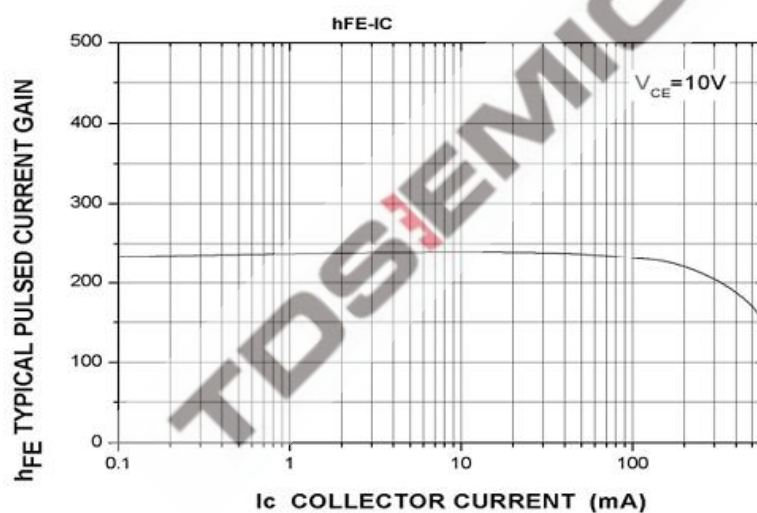
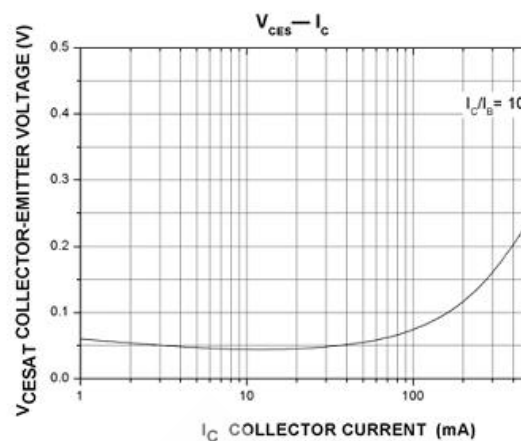
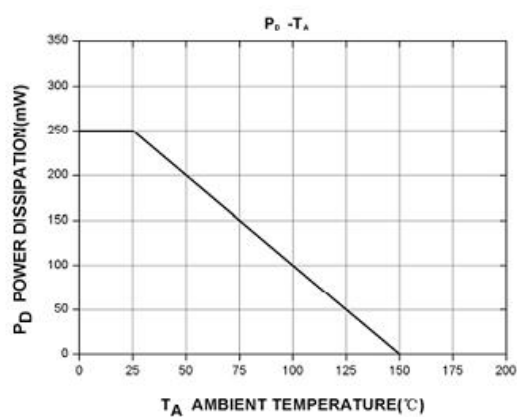
参数/Parameter	符号/ Symbol	数值/Value	单位/Unit
集电极-基极电压/Collector-Base Voltage	V_{CBO}	75	V
集电极-发射极电压/Collector-Emitter Voltage	V_{CEO}	40	V
发射极-基极电压/Emitter-Base Voltage	V_{EBO}	6	V
集电极连续电流/Collector Current Continuous	I_C	0.6	A
集电极耗散功率/Collector Power Dissipation	P_C	0.25	W
热阻/ Thermal Resistance Junction to Ambient	$R_{\theta JA}$	500	°C/mW
结温/Junction Temperature	T_J	250	°C
储存温度/Storage Temperature	T_{stg}	-55 ~ 150	°C

电性能参数/Electrical Characteristics (TA=25°C unless otherwise noted)

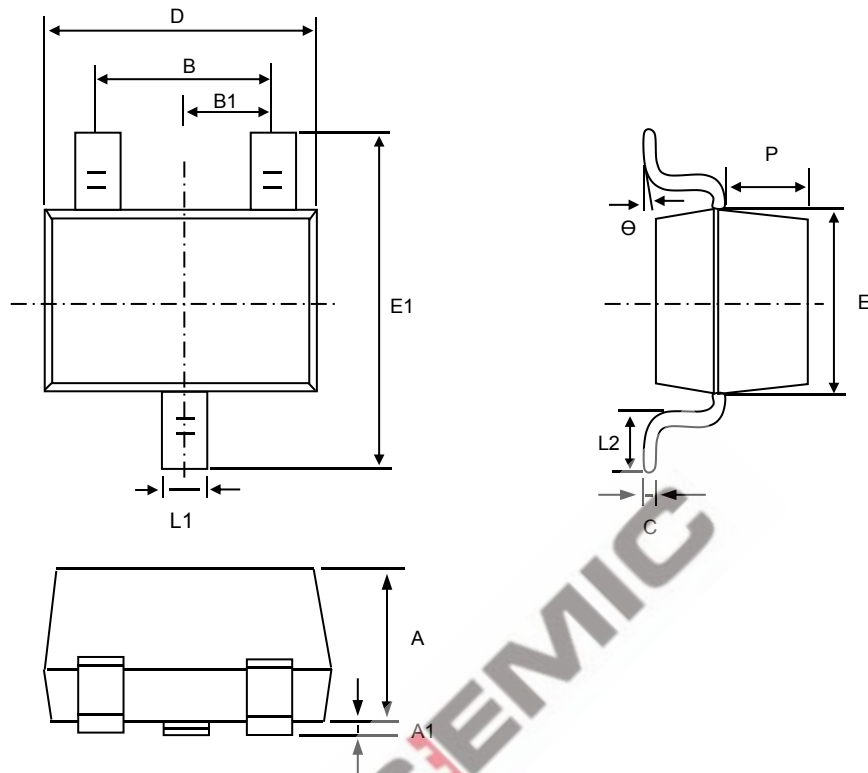
参数	符号	测试条件	最小值	最大值	单位
集电极-基极击穿电压	$V_{BR(CBO)}$	$I_C = 10\mu A, I_E = 0$	75		V
集电极-发射极击穿电压	$V_{BR(CEO)}$	$I_C = 10mA, I_B = 0$	40		V
发射极-基极击穿电压	$V_{BR(EBO)}$	$I_E = 10\mu A, I_C = 0$	6		V
集电极截止电流	I_{CBO}	$V_{CB} = 60V, I_E = 0$		0.01	μA
发射极截止电流	I_{EBO}	$V_{EB} = 3V, I_C = 0$		0.1	μA
集电极发射极穿透电流	I_{CEX}	$V_{CE} = 30V, V_{BE(off)} = 3V$		0.01	μA
直流电流增益	$h_{FE(1)}^*$	$V_{CE} = 10V, I_C = 150mA$	100	300	
直流电流增益	$h_{FE(2)}^*$	$V_{CE} = 10V, I_C = 0.1mA$	40		
直流电流增益	$h_{FE(2)}^*$	$V_{CE} = 10V, I_C = 500mA$	42		
集电极-发射极饱和压降	$V_{CE(sat)}^*$	$I_C = 500mA, I_B = 50mA$		1	V
集电极-发射极饱和压降	$V_{CE(sat)}^*$	$I_C = 150mA, I_B = 15mA$		0.3	V
基极-发射极饱和压降	$V_{BE(sat)}^*$	$I_C = 500mA, I_B = 50mA$		2	V
基极-发射极饱和压降	$V_{BE(sat)}^*$	$I_C = 150mA, I_B = 15mA$		1.2	V
特征频率	f_T	$V_{CE} = 6V, I_C = 20mA, f = 30MHz$	150		MHz
延迟时间	t_d	$V_{CC} = 30V, V_{BE(off)} = -0.5V,$ $I_C = 150mA, I_{B1} = 15mA$		10	nS
上升时间	t_r			25	nS
存储时间	t_s	$V_{CC} = 30V, I_C = 150mA,$ $I_{B1} = -I_{B2} = 15mA$		225	nS
下降时间	t_f			60	nS

*Pulse test: Pulse Width $\leq 300\mu S$, Duty Circle $\leq 2.0\%$

典型特性曲线图/Typical Characteristics



成品外观尺寸/SOT-23 Package Information



Symbol	Dim in mm		
	Min	Nor	Max
A	0.900	1.000	1.100
A1	0.000	0.050	0.100
L1	0.350	0.400	0.500
C	0.100	0.110	0.120
D	2.800	2.900	3.000
E	1.250	1.300	1.350
E1	2.250	2.400	2.550
B	1.800	1.900	2.000
B1	0.950TPY.		
L2	0.200	0.350	0.450
P	0.550	0.575	0.600