

# 深圳建扬技术有限公司

## 样品承认书

项 目 名 称: TL-3322V

样 品 名 称: TWGMC/台湾迪嘉

样 品 规 格: MMBT3904 SOT-23

物 料 编 码: 45PNPN2N3904

日 期: 2023 年 7 月 10 号

供应商	制 定	审 核	批 准
	陈丽萍	林吟华	钟广帆
建 扬	资材核准	研发核准	品质核准
	周俊娟		

1. 此样品承认书一式三份（含样品），其他情况以通知为准；
2. 承认书一经签署即按此承认标准做货，不得更改；

供 应 商 名 称 深 圳 市 瑞 利 昇 科 技 有 限 公 司

电 话 TEL 0755-83255665 多线

地 址 深圳市福田区振华路 122 号海外装饰大厦 A 座 6 楼

厂商资历: ☐ ISO9001 ☐ ISO14001 ☐ 其他

送样履历: ☐ 首次送样 ☐ 二次送样 ☐ 三次送样

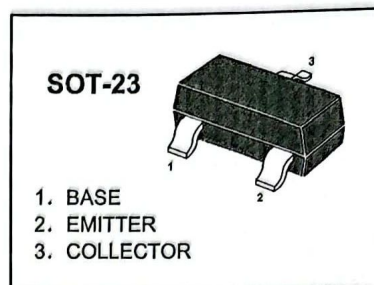
# MMBT3904 TRANSISTOR (NPN)

## FEATURES

- Epitaxial Planar Die Construction
- Complementary PNP Type Available (MMBT3906)
- Ideal for Medium Power Amplification and Switching

MARKING: 1AM

~ 25P



## MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)

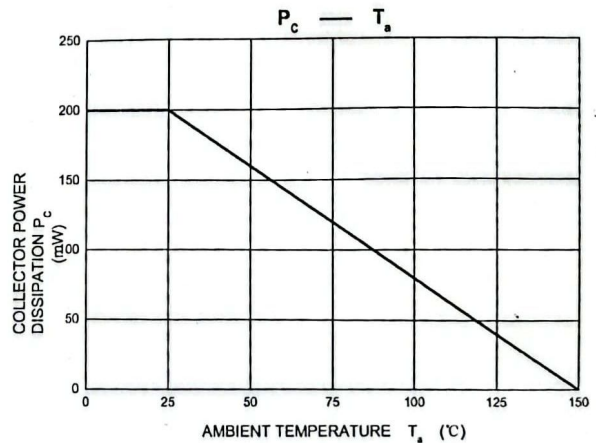
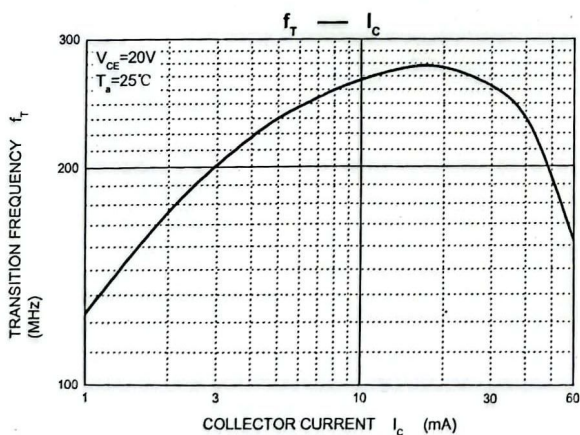
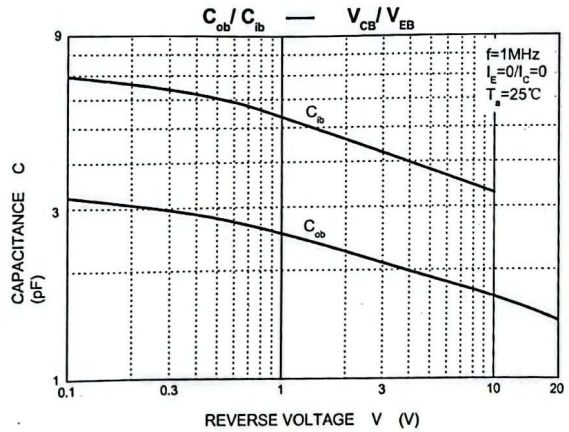
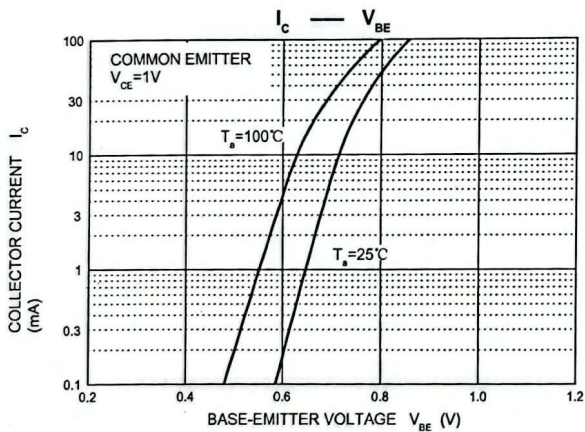
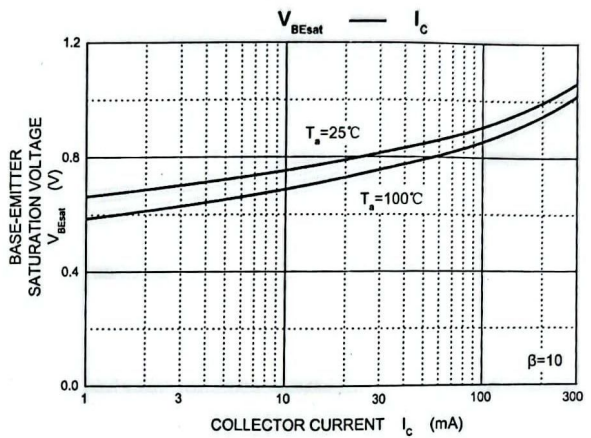
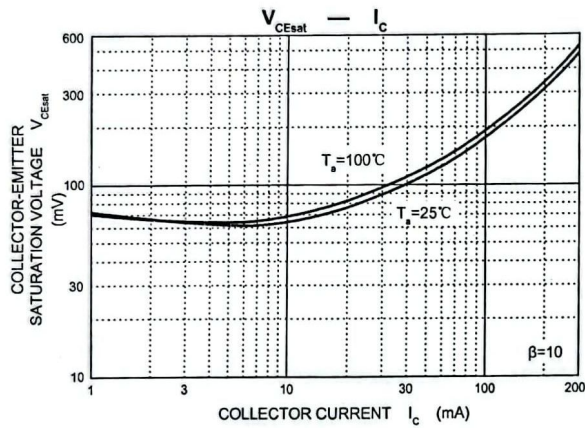
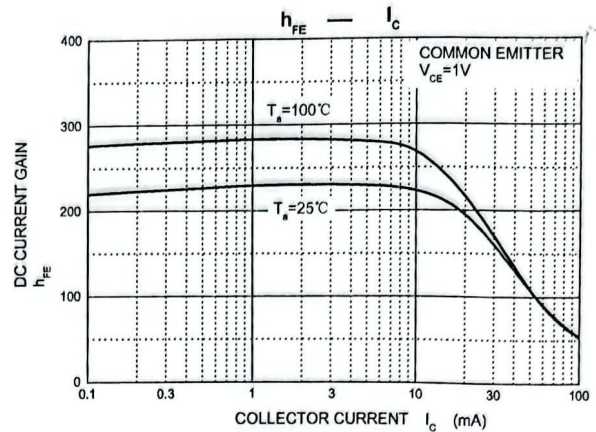
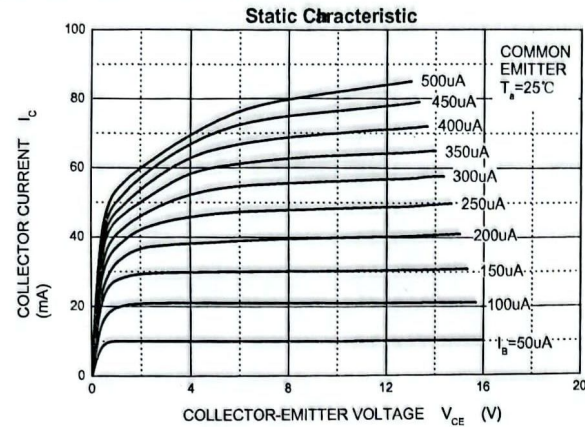
Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	60	V
V <sub>CEO</sub>	Collector-Emitter Voltage	40	V
V <sub>EBO</sub>	Emitter-Base Voltage	6	V
I <sub>C</sub>	Collector Current	200	mA
P <sub>C</sub>	Total Device Dissipation	200	mW
R <sub>θJA</sub>	Thermal Resistance From Junction to Ambient	625	°C/W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55 ~ +150	°C

## ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = 10μA, I <sub>E</sub> = 0	60		V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = 1mA, I <sub>B</sub> = 0	40		V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = 10μA, I <sub>C</sub> = 0	6		V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> = 60V, I <sub>E</sub> = 0		0.1	μA
Collector cut-off current	I <sub>CEX</sub>	V <sub>CE</sub> = 30V, V <sub>BE(off)</sub> = 3V		50	nA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = 5V, I <sub>C</sub> = 0		0.1	μA
DC current gain	h <sub>FE(1)</sub>	V <sub>CE</sub> = 1V, I <sub>C</sub> = 10mA	100	300	
	h <sub>FE(2)</sub>	V <sub>CE</sub> = 1V, I <sub>C</sub> = 50mA	60		
	h <sub>FE(3)</sub>	V <sub>CE</sub> = 1V, I <sub>C</sub> = 100mA	30		
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 50mA, I <sub>B</sub> = 5mA		0.3	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 50mA, I <sub>B</sub> = 5mA		0.95	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 20V, I <sub>C</sub> = 10mA, f = 100MHz	300		MHz
Delay Time	t <sub>d</sub>	V <sub>CC</sub> = 3V, V <sub>BE</sub> = -0.5V		35	nS
Rise Time	t <sub>r</sub>	I <sub>C</sub> = 10mA, I <sub>B1</sub> = -I <sub>B2</sub> = 1.0mA		35	nS
Storage Time	t <sub>s</sub>	V <sub>CC</sub> = 3V, I <sub>C</sub> = 10mA,		200	nS
Fall Time	t <sub>f</sub>	I <sub>B1</sub> = -I <sub>B2</sub> = 1mA		50	nS



## Typical Characteristics



# PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23

