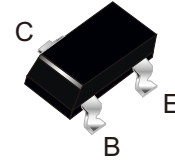


## FEATURES

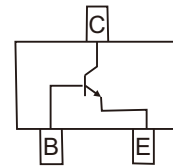
- Epoxy meets UL-94 V-0 flammability rating
- Complementary to MMBT2907A
- Power Dissipation of 300mW
- High Stability and High Reliability

### SOT-23



## MECHANICAL DATA

- Case: SOT-23(TO-236)
- Terminals: Plated solderable per MIL-STD-750, method 2026
- Mounting Position: Any
- Marking: 1P



## MAXIMUM RATINGS( $T_A=25^{\circ}\text{C}$ Unless otherwise specified)

Parameter	Symbol	Unit	Value
Collector-Emitter Voltage	$V_{CE0}$	V	40
Collector-Base Voltage	$V_{CB0}$	V	75
Emitter-Base Voltage	$V_{EB0}$	V	6.0
Collector Current, Continuous	$I_C$	mA	600
Power Dissipation	$P_D$	mW	300
Operation Junction Temperature	$T_J$	$^{\circ}\text{C}$	-55 to +150
Storage Temperature	$T_{STG}$	$^{\circ}\text{C}$	-55 to +150
Thermal resistance From junction to ambient	$R_{\theta JA}$	$^{\circ}\text{C}/\text{W}$	417

# MMBT2222A

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

Parameter	Symbol	Unit	Conditions	Min	Max
Collector-Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	V	I <sub>C</sub> =10mA, I <sub>B</sub> =0	40	---
Collector-Base Breakdown Voltage	V <sub>(BR)CBO</sub>	V	I <sub>C</sub> =10μA, I <sub>E</sub> =0	75	---
Emitter-Base Breakdown Voltage	V <sub>(BR)EBO</sub>	V	I <sub>E</sub> =10μA, I <sub>C</sub> =0	6.0	---
Collector cut-off Current	I <sub>CBO</sub>	nA	V <sub>CB</sub> =60V, I <sub>E</sub> =0	---	10
Collector cut-off Current	I <sub>CEX</sub>	nA	V <sub>CE</sub> =30V, V <sub>EB(off)</sub> =3V	---	10
Emitter cut-off Current	I <sub>EBO</sub>	nA	V <sub>EB</sub> =3V, I <sub>C</sub> =0	---	100
DC Current Gain	h <sub>FE(1)</sub>		I <sub>C</sub> =150mA, V <sub>CE</sub> =10V	100	300
	h <sub>FE(2)</sub>		I <sub>C</sub> =0.1mA, V <sub>CE</sub> =10V	40	---
	h <sub>FE(3)</sub>		I <sub>C</sub> =500mA, V <sub>CE</sub> =10V	42	---
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	V	I <sub>C</sub> =150mA, I <sub>B</sub> =15mA	---	0.30
			I <sub>C</sub> =500mA, I <sub>B</sub> =50mA	---	1.00
Base-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	V	I <sub>C</sub> =150mA, I <sub>B</sub> =15mA	---	1.20
			I <sub>C</sub> =500mA, I <sub>B</sub> =50mA	---	2.00
Current Gain-Bandwidth Product	f <sub>T</sub>	MHz	I <sub>C</sub> =20mA, V <sub>CE</sub> =20V f=100MHz	300	---
Noise Figure	NF	dB	V <sub>CE</sub> =5.0V, f=1.0KHz, I <sub>C</sub> =100μA, R <sub>S</sub> =1.0KΩ	---	---
Delay time	t <sub>d</sub>	nS	V <sub>CC</sub> =30V, V <sub>BE(off)</sub> =-0.5V, I <sub>C</sub> =150mA, I <sub>B1</sub> =15mA	---	10
Rise time	t <sub>r</sub>	nS		---	25
Storage time	t <sub>s</sub>	nS	V <sub>CC</sub> =30V, I <sub>C</sub> =150mA, I <sub>B1</sub> =I <sub>B2</sub> =15mA	---	225
Fall time	t <sub>f</sub>	nS		---	60

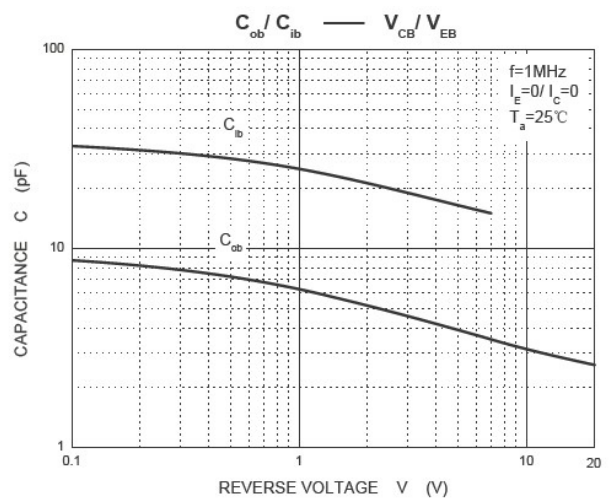
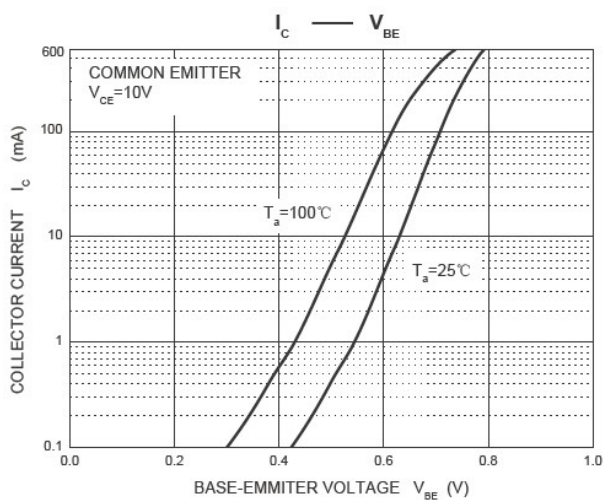
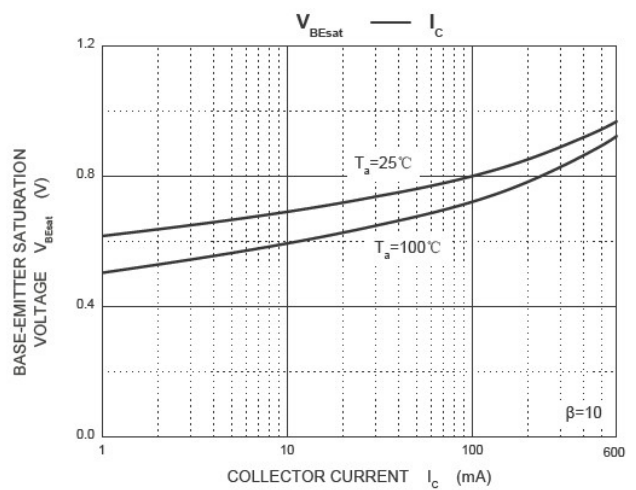
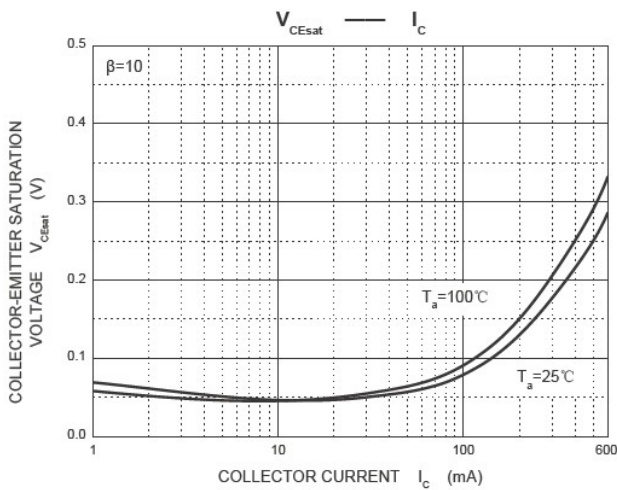
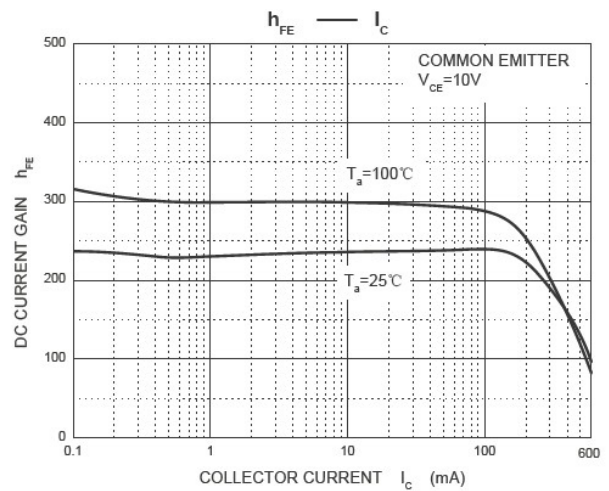
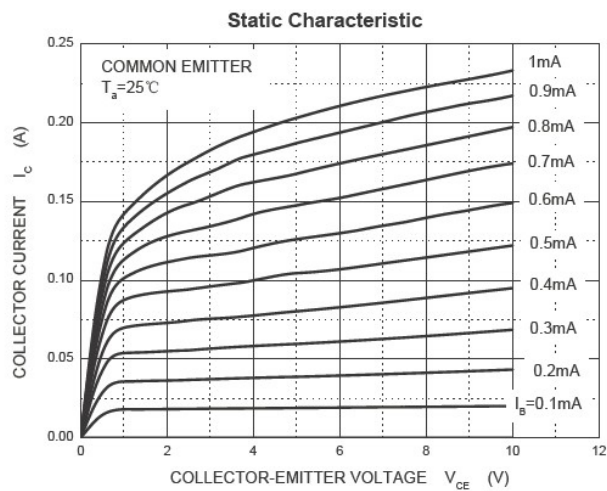
## CLASSIFICATION OF h<sub>FE(1)</sub>

HFE	100-300	
Rank	L	H
Range	100-200	200-300

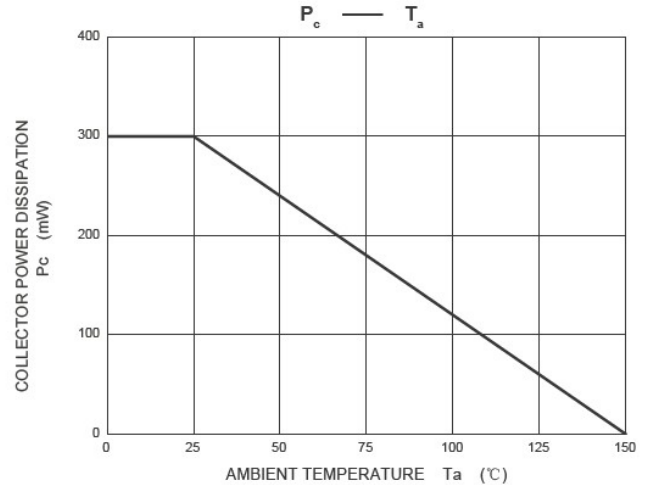
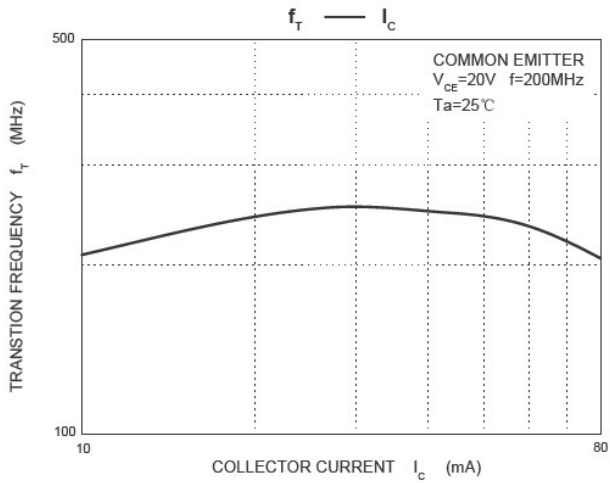
## AVAILABLE PACK INFORMATION

Product code	Pack	Reel Size (mm)	Quantity (Pcs/reel)	Quantity (pcs/box)	Quantity (pcs/carton)
MMBT2222A	T/R	Φ180	3K	30K	120K

## Characteristics(Typical)

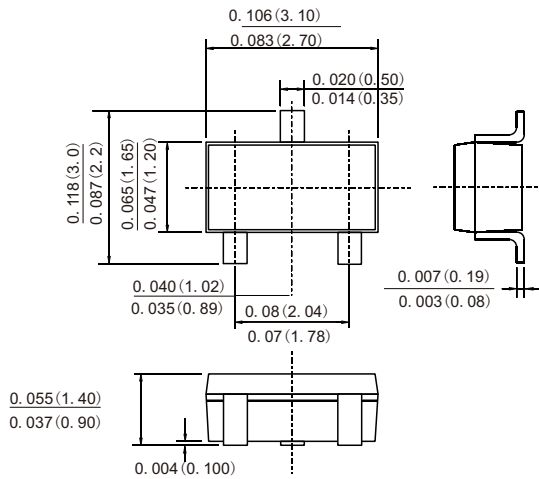


# MMBT2222A

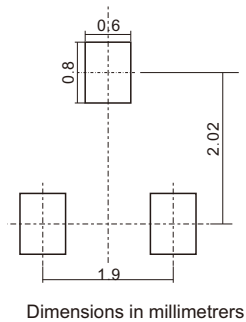


## Outline Dimensions

### SOT-23



## Suggested pad layout



## Friendship Reminder

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