



## NPN General Purpose Amplifier

### Features

Moisture Sensitivity Level 1  
Surface mount package ideally Suited for Automatic Insertion  
Epoxy meets UL-94 V-0 flammability rating, halogen-free

### Mechanical Data

**Package:** SOT-523  
**Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102  
**Marking:** 1P

### Maximum Ratings (Ta=25 Unless otherwise specified)

Item	Symbol	Unit	Conditions	Value
Collector-Emitter Voltage	$V_{CEO}$	V	$I_C=10\text{mAdc}$ , $I_B=0$	40
Collector-Base Voltage	$V_{CBO}$	V	$I_C=10\text{uAdc}$ , $I_E=0$	75
Emitter-Base Voltage	$V_{EBO}$	V	$I_E=10\text{uAdc}$ , $I_C=0$	6



# MMBT2222AT

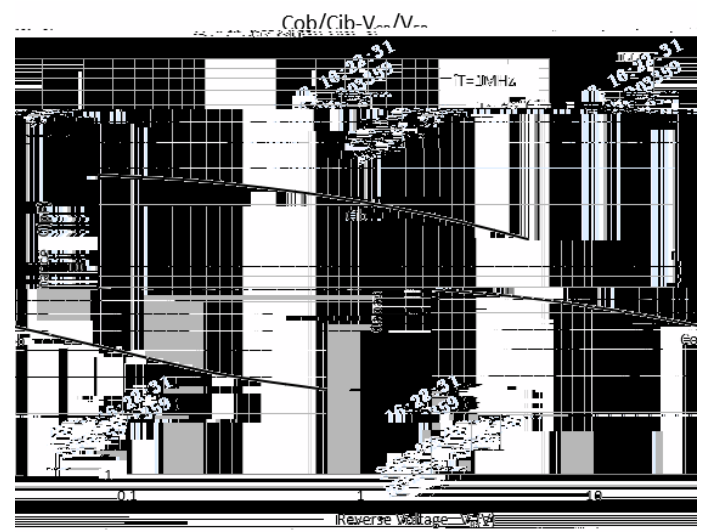
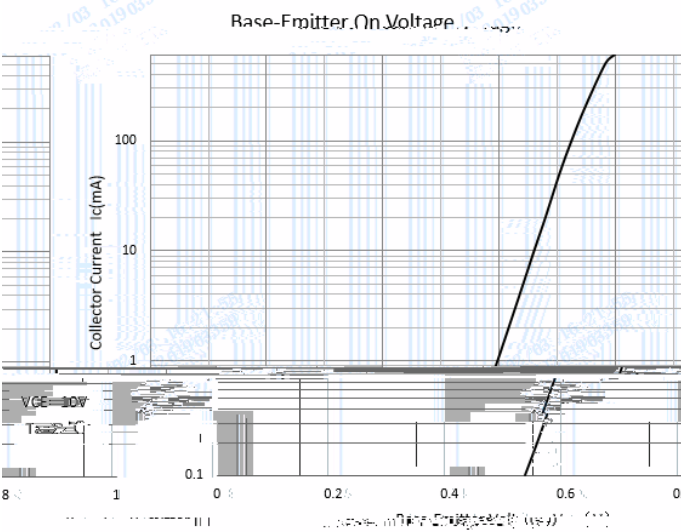
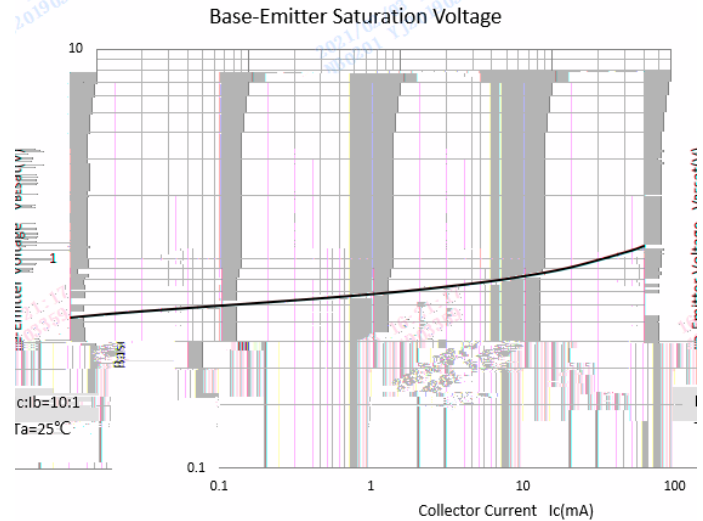
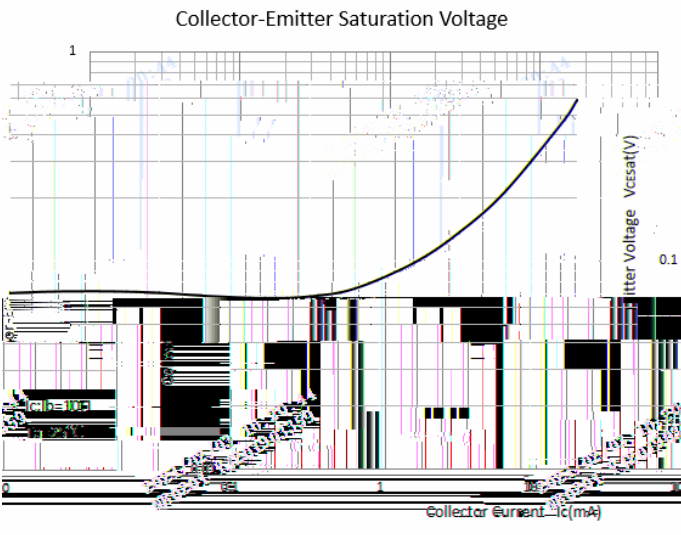
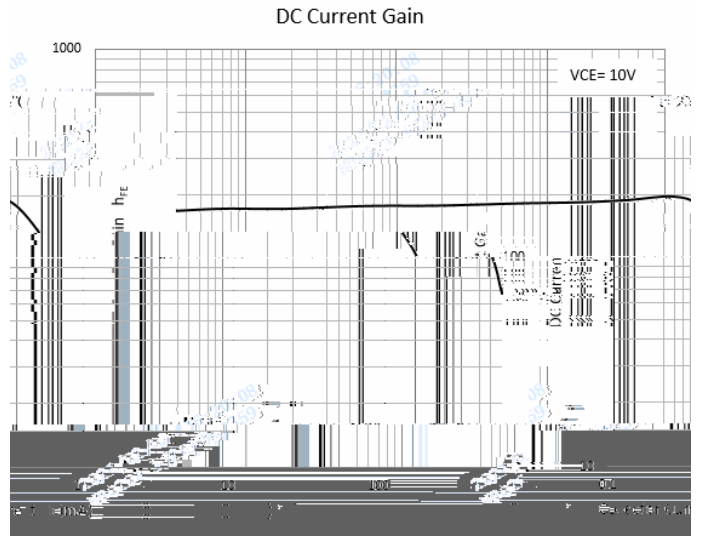
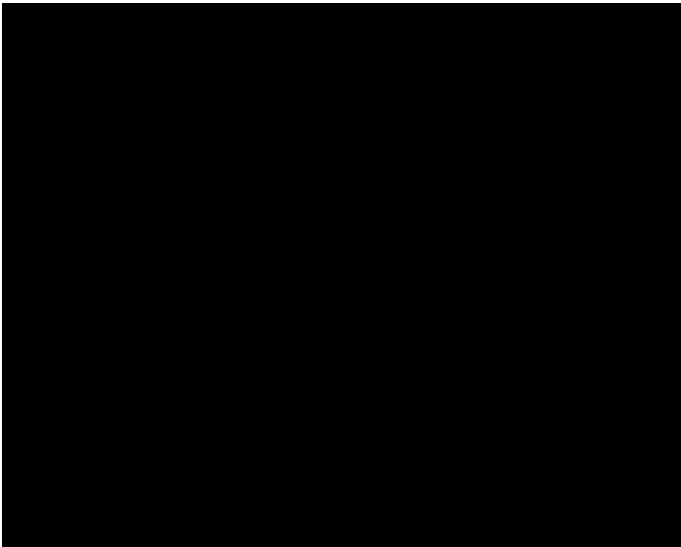
## Electrical Characteristics (Ta=25 unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	Max
Collector-Emitter Voltage	$V_{CE0}$	V	$I_C=10\text{mA}$ , $I_B=0$	40	
Collector-Base Voltage	$V_{CB0}$	V	$I_C=10\mu\text{A}$ , $I_E=0$	75	
Emitter-Base Voltage	$V_{EB0}$	V	$I_E=10\mu\text{A}$ , $I_C=0$	6	
Collector-base Cut-off Current	$I_{CBO}$	nA	$V_{CB}=70\text{Vdc}$		100
Emitter-base cut-off current	$I_{EBO}$	nA	$V_{EB}=3\text{Vdc}$		100
Collector-emitter Cut-off Current	$I_{CEX}$	nA	$V_{CE}=60\text{Vdc}$ , $V_{EB}=3\text{Vdc}$		10
DC Current Gain	$h_{FE}$	Ic	$I_C=0.1\text{mA}$ , $V_{CE}=10\text{Vdc}$	35	
			$I_C=1\text{mA}$ , $V_{CE}=10\text{Vdc}$	50	



# MMBT2222AT

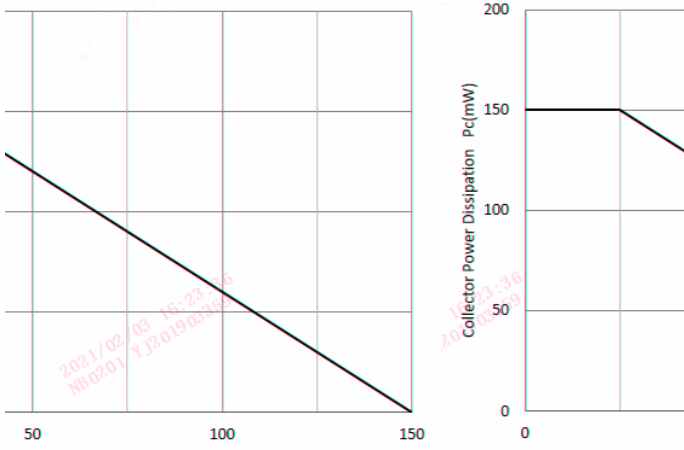
## Characteristics (Typical)



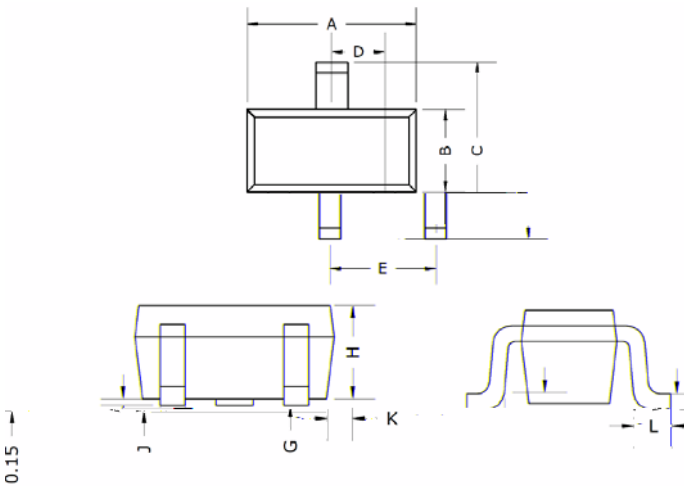


# MMBT2222AT

Collector Power Derating Curve

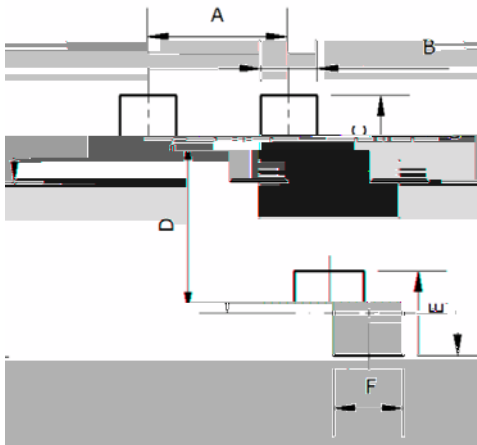


## SOT-523 Package Outline Dimensions



DIM	DIMENSIONS			
	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.059	0.067	1.50	1.70
B	0.030	0.033	0.75	0.85
C	0.052	0.060	1.30	1.50
D	0.50	0.52	0.020	0.025
E	0.043	0.050	0.0035	0.010
F	0.11	0.10	0.000	0.000
G	0.60	0.60	0.024	0.024
H	0.002	0.016	0.000	0.004
J	0.006	0.014	0.15	0.35
K	0.010	0.018	0.25	0.45

## SOT-523 Suggested Pad Layout



DIMENSIONS	
DIM	MM (TYP)
A	1.00
B	0.40
C	0.60
D	1.24
E	0.60
F	0.50



## Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.