

## Micro Commercial Components



Micro Commercial Components  
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MMBT1616A-Y  
MMBT1616A-G  
MMBT1616A-L

## Features

- Halogen free available upon request by adding suffix "-HF"
- Capable of 350mWatts of Power Dissipation and 1A Ic.
- Operating and Storage Junction Temperatures: -55°C to 150°C
- Surface Mount SOT-23 Package
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking Code:16A
- Thermal Resistance Junction to Ambient: 357 °C/W

### Electrical Characteristics @ 25°C Unless Otherwise Specified

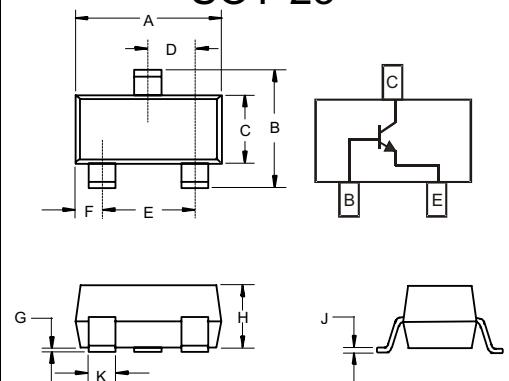
Symbol	Parameter	Min	Max	Units
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* ( $I_C=2.0\text{mA}$ , $I_B=0$ )	60		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=10\mu\text{A}$ , $I_E=0$ )	120		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E=10\mu\text{A}$ , $I_C=0$ )	6.0		Vdc
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=60\text{Vdc}$ , $I_E=0$ )		100	nAdc
$I_{EBO}$	Emitter Cutoff Current ( $V_{EB}=6\text{Vdc}$ , $I_C=0$ )		100	nAdc
$h_{FE}$	DC Current Gain ( $I_C=100\text{mA}$ , $V_{CE}=2.0\text{Vdc}$ ) ( $I_C=1.0\text{A}$ , $V_{CE}=2.0\text{Vdc}$ )	135 81	600	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=1\text{A}$ , $I_B=50\text{mA}$ )		0.3	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ( $I_C=1\text{A}$ , $I_B=50\text{mA}$ )		1.2	Vdc
$V_{BE}$	Base-Emitter Voltage ( $I_C=50\text{mA}$ , $V_{CE}=2\text{Vdc}$ )	0.6	0.7	Vdc
$f_T$	Transition frequency ( $I_C=100\text{mA}$ , $V_{CE}=2\text{Vdc}$ , $f=100\text{MHz}$ )	100		MHz
$C_{obo}$	Collector Output Capacitance ( $V_{CB}=10\text{Vdc}$ , $I_E=0$ , $f=1.0\text{MHz}$ )		19	pF

## CLASSIFICATION OF hFE

RANK	Y	G	L
RANGE	135-270	200-400	300-600

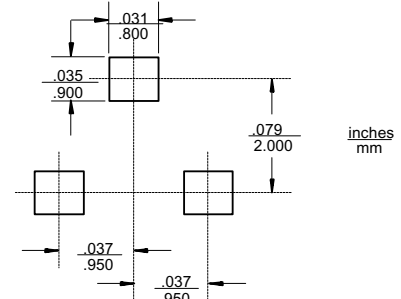
## NPN General Purpose Amplifier

# SOT-23



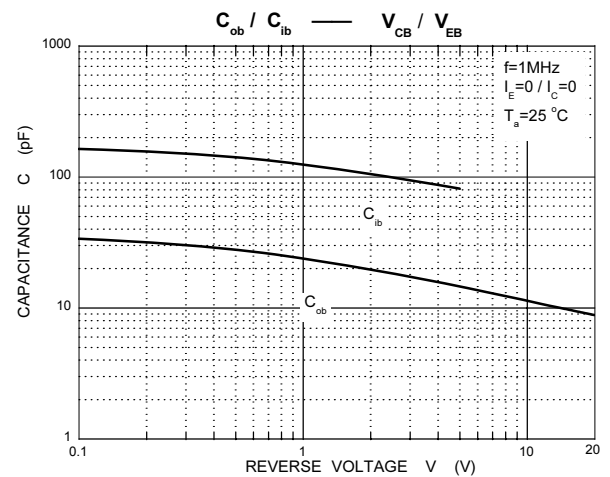
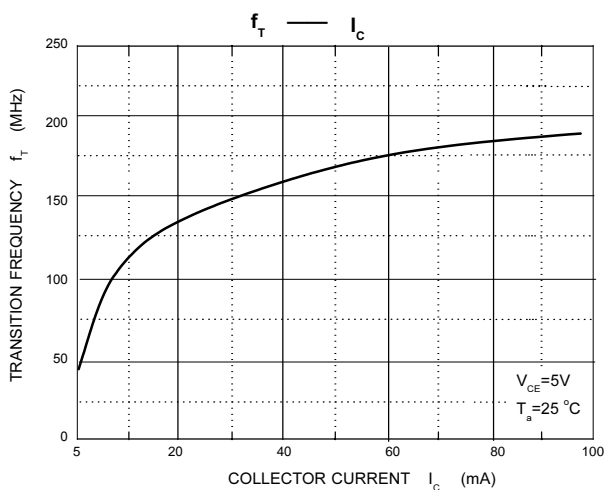
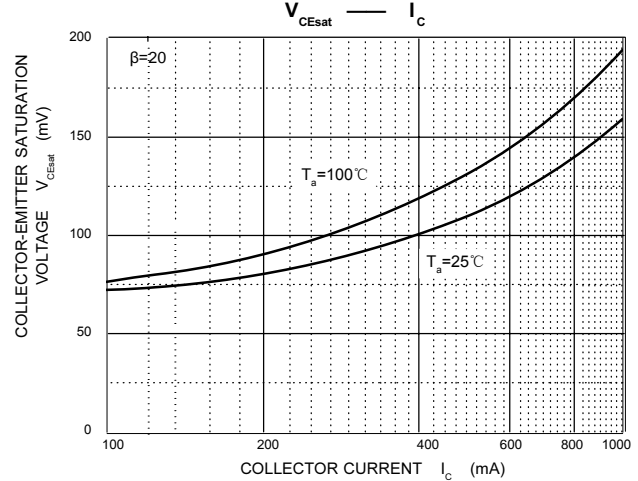
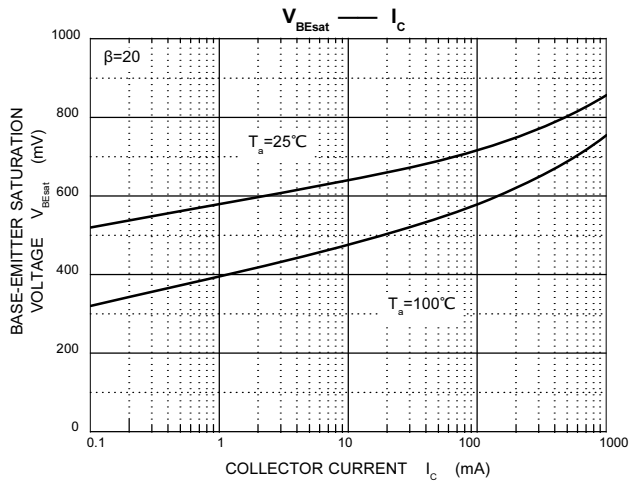
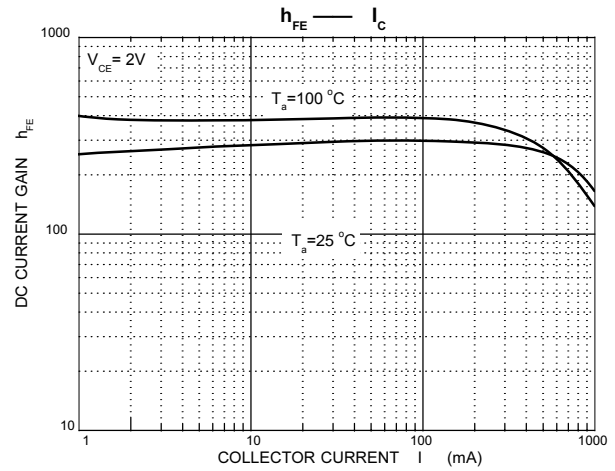
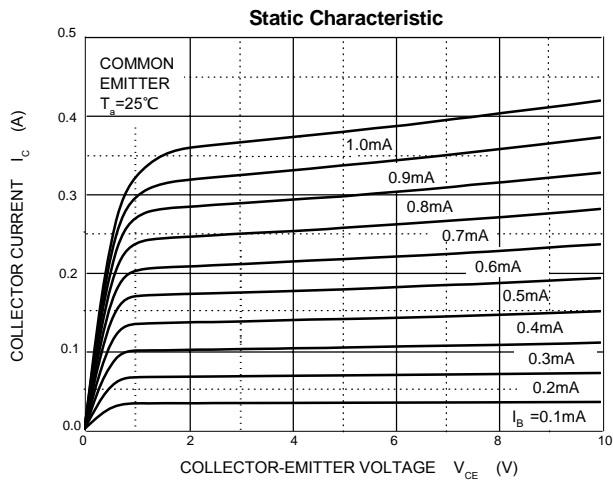
DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

### Suggested Solder Pad Layout



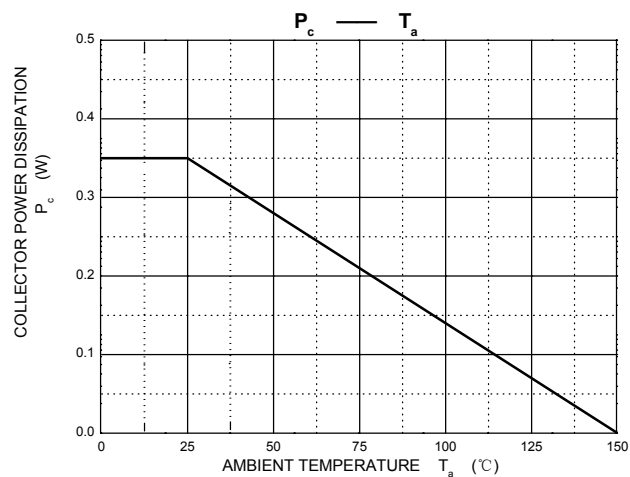
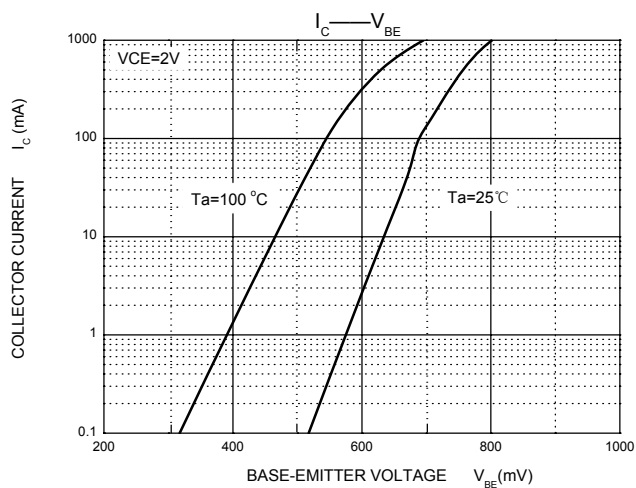
# MMBT1616A

## Typical Characteristics



# MMBT1616A

## Typical Characteristics



## Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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Authorized Distributor

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