



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

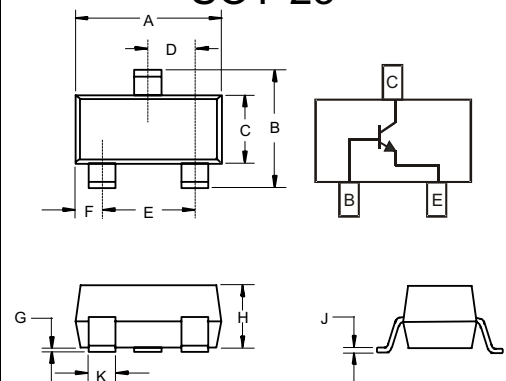
Symbol	Parameter	Min	Max	Units
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* ($I_C=2.0mA$, $I_B=0$)	60		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C=10\mu A$, $I_E=0$)	120		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ($I_E=10\mu A$, $I_C=0$)	6.0		Vdc
I_{CBO}	Collector Cutoff Current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

CLASSIFICATION OF h_{FE}

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

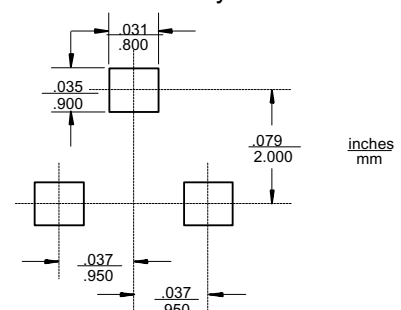
NPN General Purpose Amplifier

SOT-23



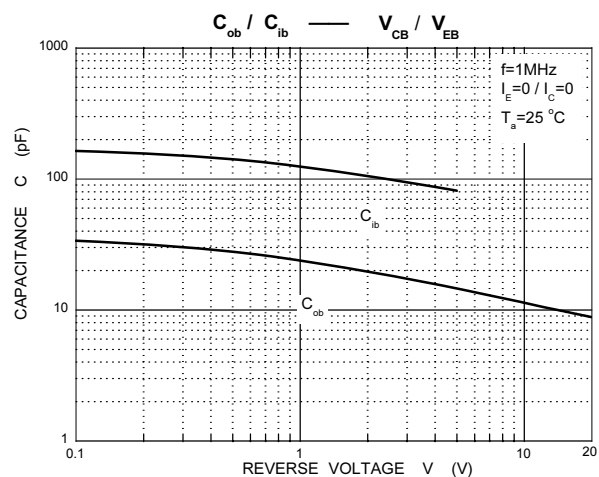
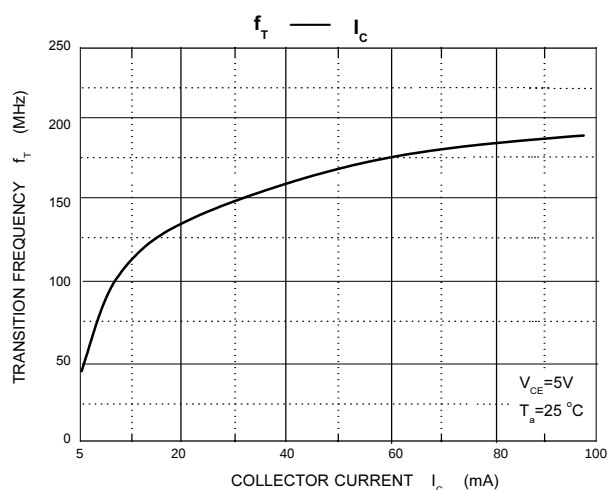
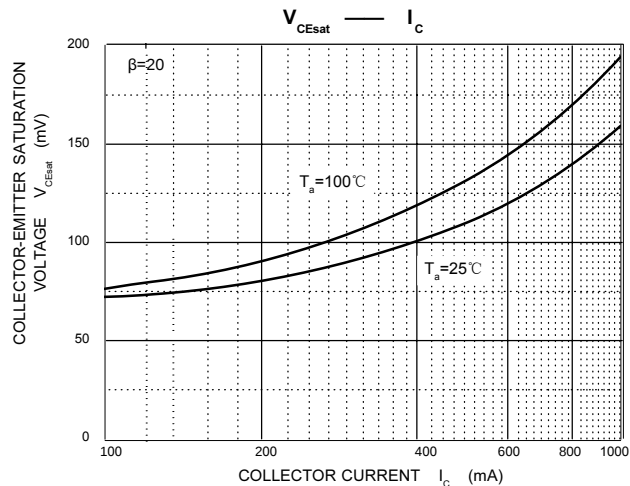
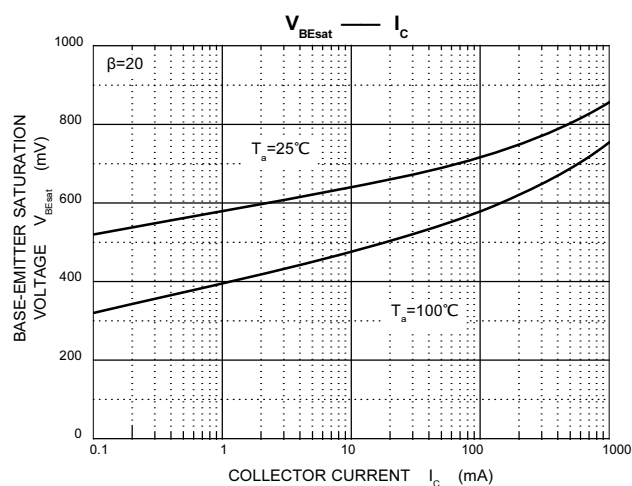
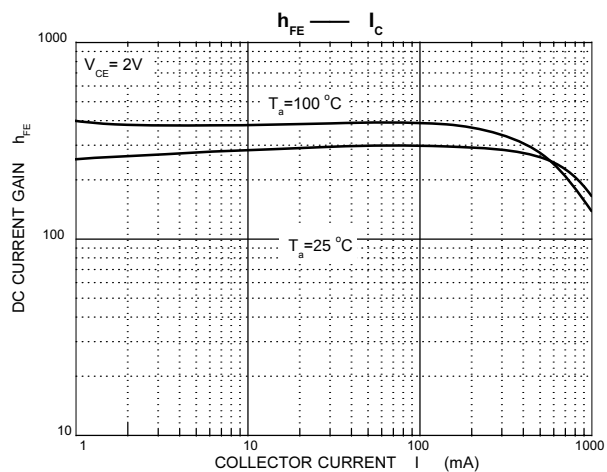
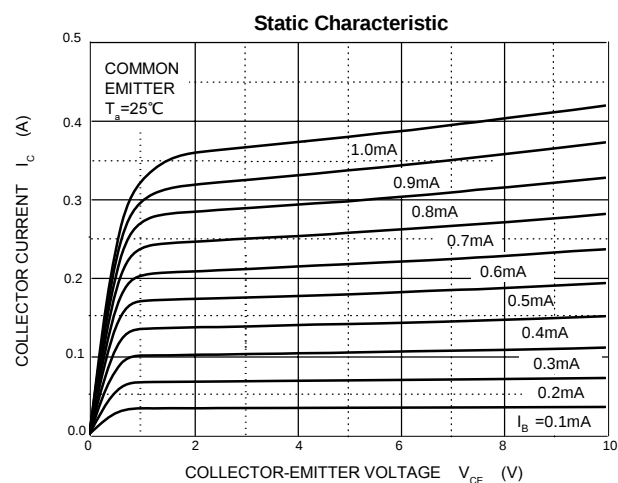
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout



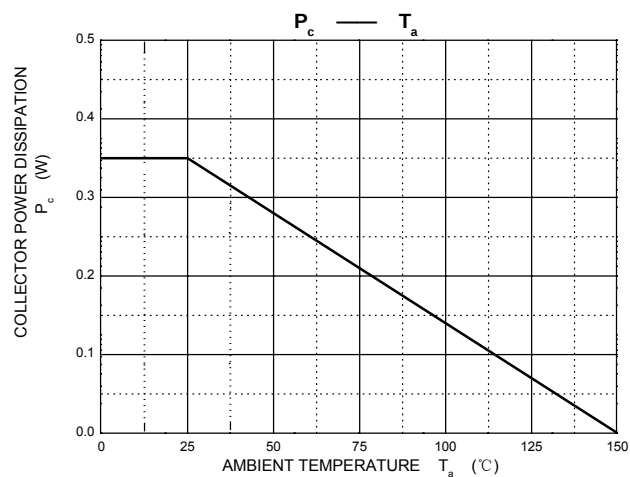
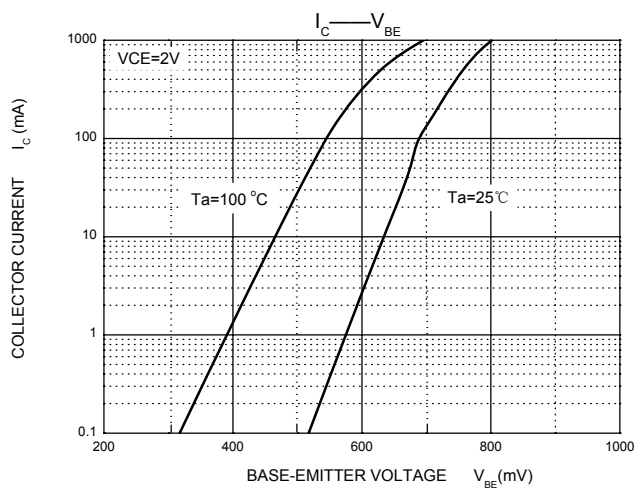
MMBT1616A

Typical Characteristics



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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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