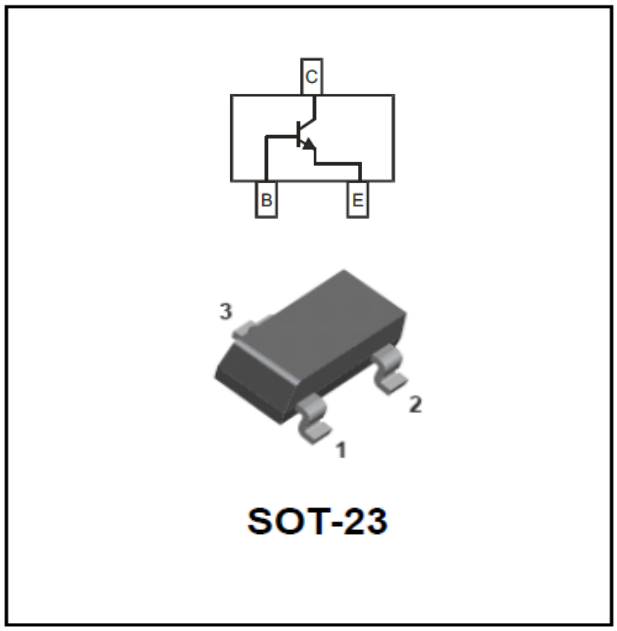
NPN General Purpose Amplifier



Features

- ●Epoxy meets UL-94 V-0 flammability rating
- ●Halogen free available upon request by adding suffix ”HF”
- ●Moisure Sensitivity Level 1
- ●Marking:G1

■Maximum Rantings (Ta=25℃)

Item	Symbol	Unit	Conditions	Value
Collector-Emitter Voltage*	V_{CEO}	V	I_C=1.0mAdc, I_B=0	160
Collector-Base Voltage	V_{CBO}	V	I_C=100uAdc, I_E=0	180
Emitter-Base Voltage	V_{EBO}	V	I_E=10uAdc, I_C=0	6.0
Collector Current	I_C	mA		600
Collector Power Dissipation	P_C	mW		300
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	℃/W		417
Operation Junction Temperature	T_j	℃		-55 to +150
Storage Temperature	T_{stg}	℃		-55 to +150

■Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MMBT5551	F2	Approximate 0.008	3000	30000	120000	7” reel

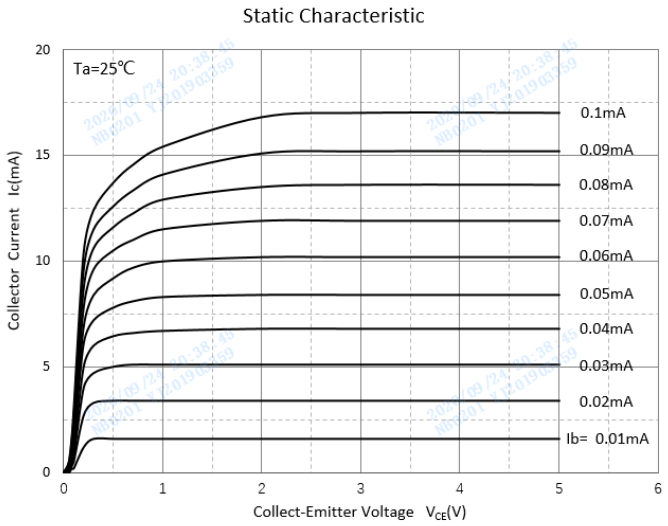
■Electrical Characteristics（Ta=25℃）

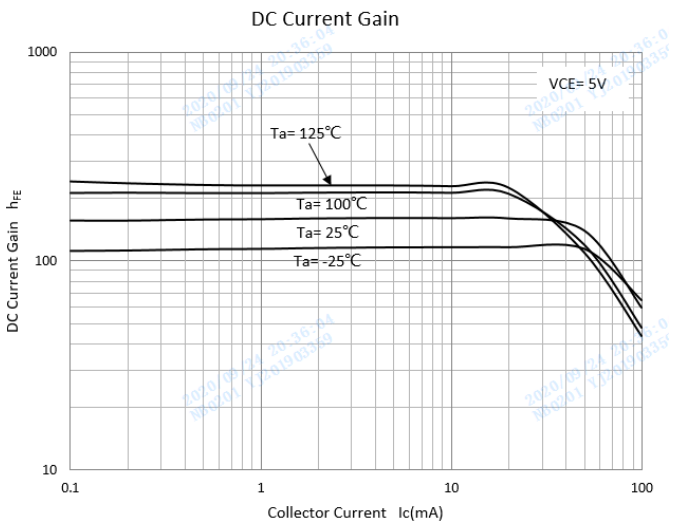
Item	Symbol	Unit	Conditions	Min	Max
Collector-Emitter Voltage	V_{CEO}	V	I_C=1.0mAdc, I_B=0	160	
Collector-Base Voltage	V_{CBO}	V	I_C=100uAdc, I_E=0	180	
Emitter-Base Voltage	V_{EBO}	V	I_E=10uAdc, I_C=0	6.0	
Collector-base Cut-off Current	I_{CBO}	nA	V_{CB}=120Vdc		50
Emitter-base Cut-off Current	I_{EB0}	nA	V_{EB}=4.0Vdc		50
DC Current Gain	h_{FE}		I_C=1.0mA V_{CE}=5.0Vdc	80	
			I_C=10mA V_{CE}=5.0Vdc	100	300
			I_C=50mA V_{CE}=5.0Vdc	50	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$1	V	I_C=10mA I_B=1.0mA		0.15
	$V_{CE(sat)}$2	V	I_C=50mA I_B=5.0mA		0.2
Base-Emitter Saturation Voltage	$V_{BE(sat)}$1	V	I_C=10mA I_B=1.0mA		1
	$V_{BE(sat)}$2	V	I_C=50mA I_B=5.0mA		1

■Small-signal Characteristics（Ta=25℃）

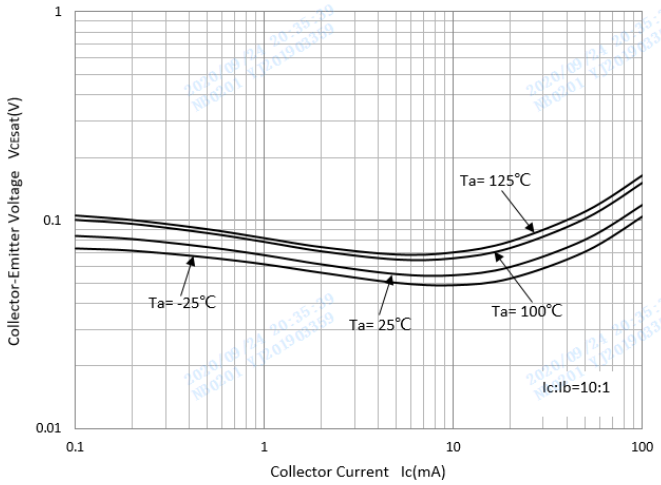
Item	Symbol	Unit	Conditions	Min	Max
Transition frequency	f_T	MHz	I_C=10mAdc, V_{CE}=5.0Vdc,f=30MHz	100	300

■Characteristics(Typical)

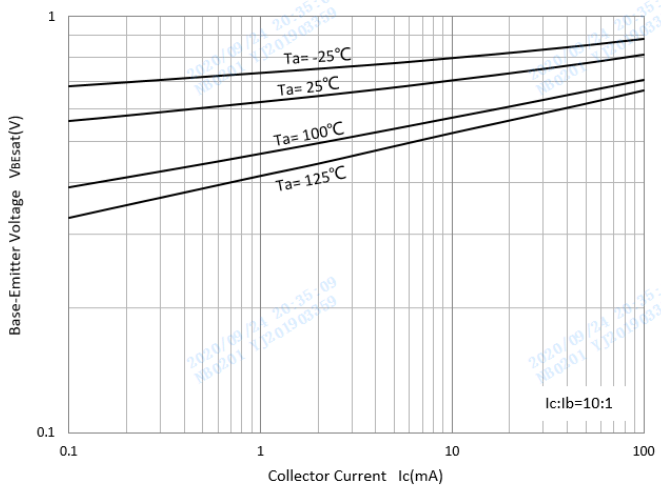




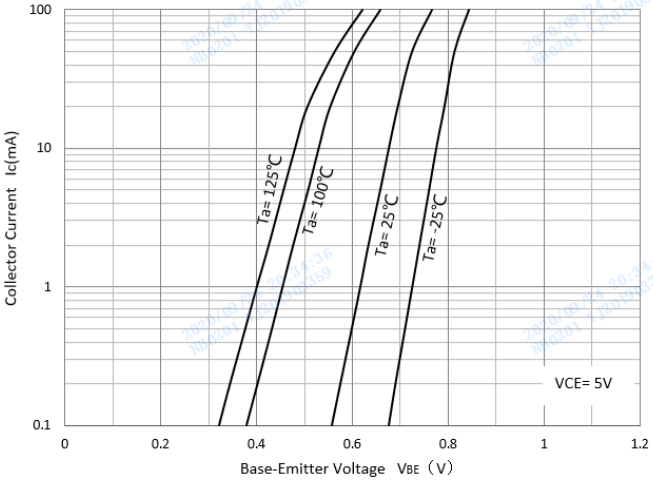
Collector-Emitter Saturation Voltage



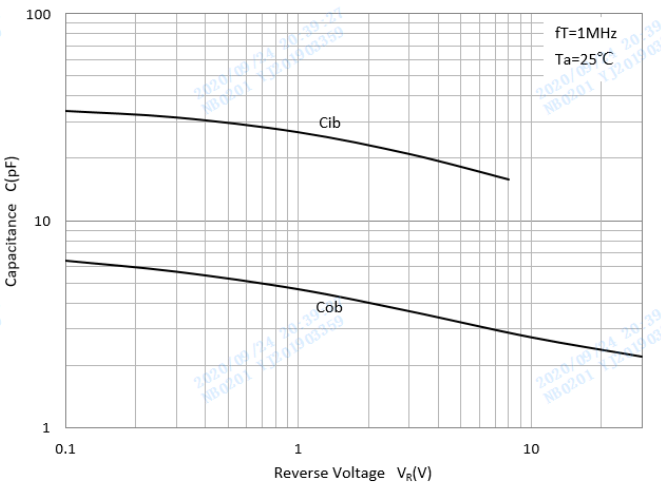
Base-Emitter Saturation Voltage



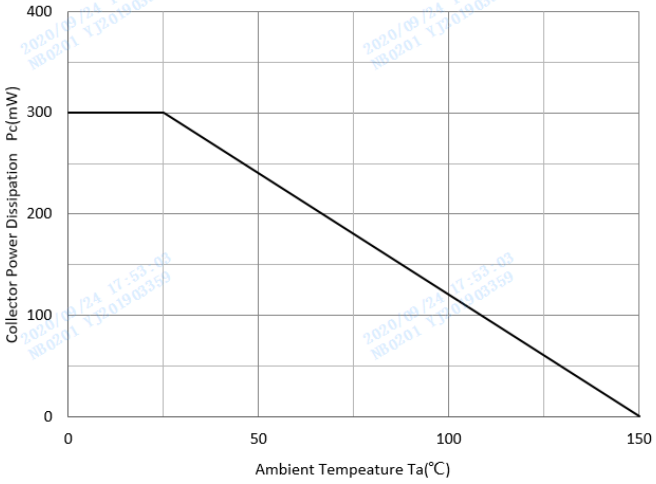
Base-Emitter On Voltage



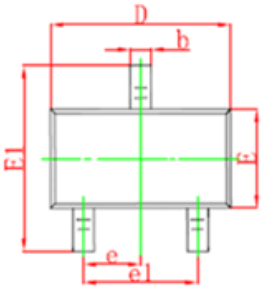
Cob/Cib-V_{CB}/V_{EB}

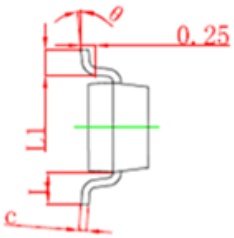


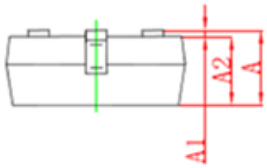
Collector Power Derating Curve



■SOT-23 Package Outline Dimensions







Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

■SOT-23 Soldering Footprint