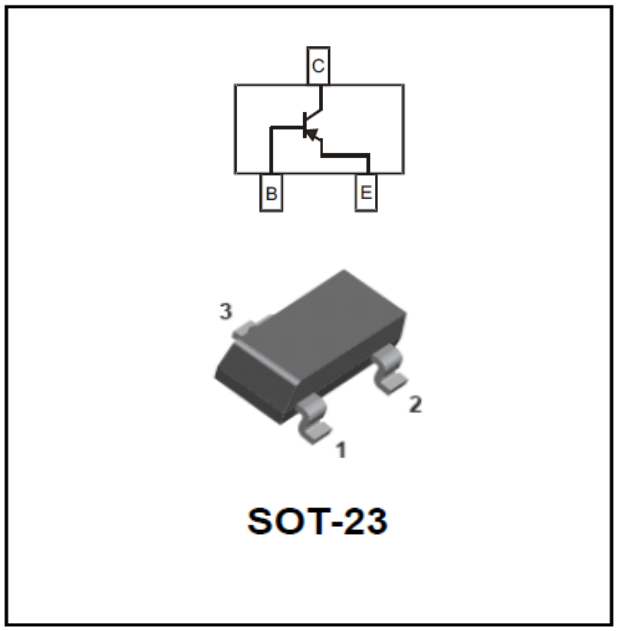
PNP General Purpose Amplifier



Features

- ●Epoxy meets UL-94 V-0 flammability rating
- ●Halogen free available upon request by adding suffix ”HF”
- ●Moisure Sensitivity Level 1
- ●Marking:2L

■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	Pc	mW		300
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	℃/W		417
Operation Junction Temperature	T_j	℃		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
MMBT5401	F2	Approximate 0.008	3000	30000	120000	7” reel

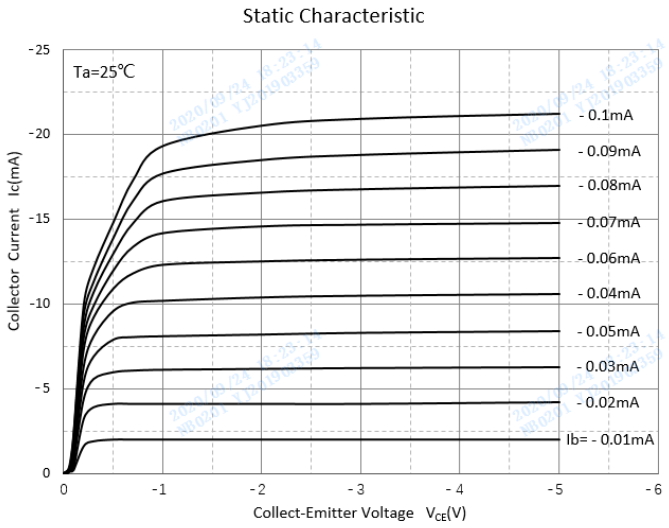
■Electrical Characteristics（T_a=25℃）

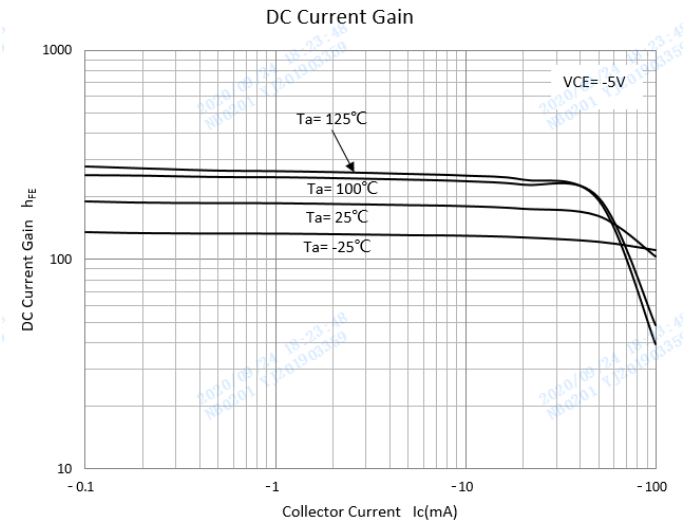
Item	Symbol	Unit	Conditions	Min	Max
Collector-Emitter Voltage*	V_{CEO}	V	I_C=-1.0mAdc, I_B=0	-160	
Collector-Base Voltage	V_{CBO}	V	I_C=-100uAdc, I_E=0	-180	
Emitter-Base Voltage	V_{EBO}	V	I_E=-10uAdc, I_C=0	-6.0	
Collector-base Cut-off Current	I_{CBO}	nA	V_{CB}=-120Vdc		-50
Base-emitter Cut-off Current	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		-0.2
	$V_{CE(sat)}2$	V	I_C=-50mA I_B=-5.0mA		-0.5
Base-Emitter Saturation Voltage	$V_{BE(sat)}1$	V	I_C=-10mA I_B=-1.0mA		-1.0
	$V_{BE(sat)}2$	V	I_C=-50mA I_B=-5.0mA		-1.0

■Small-signal Characteristics（Ta=25℃）

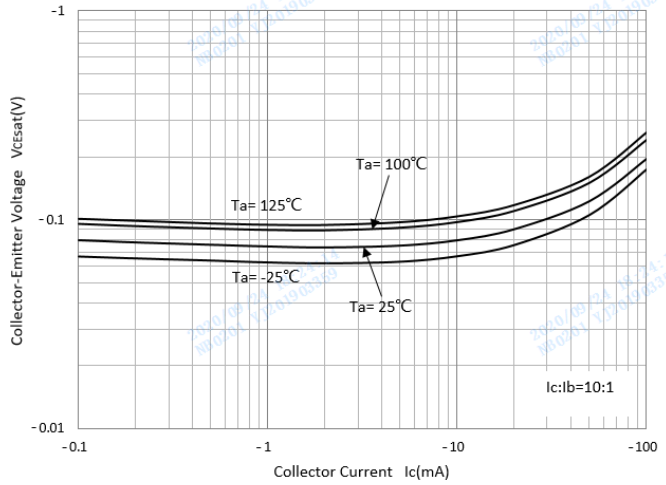
Item	Symbol	Unit	Conditions	Min	Max
Transition frequency	f_T	MHz	I_C=-10mAdc, V_{CE}=-5.0Vdc,f=30MHz	100	300

■Characteristics(Typical)

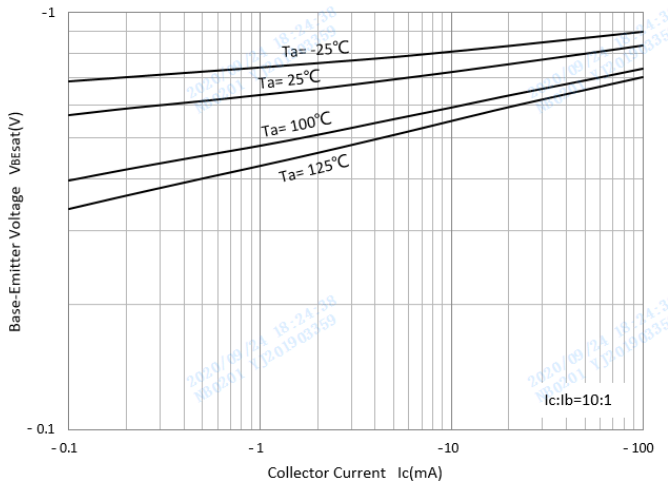




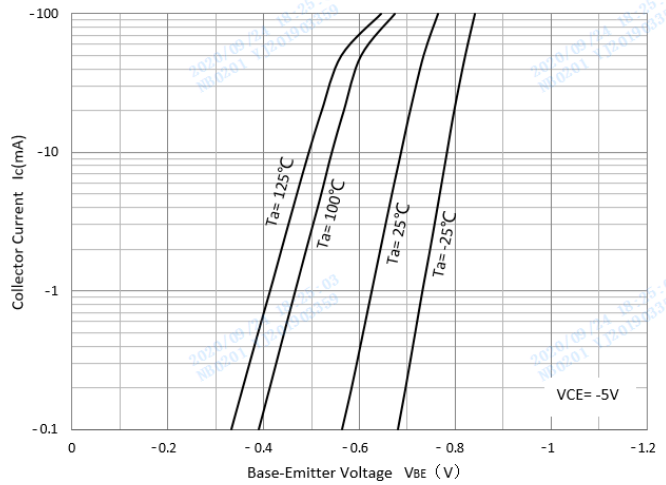
Collector-Emitter Saturation Voltage



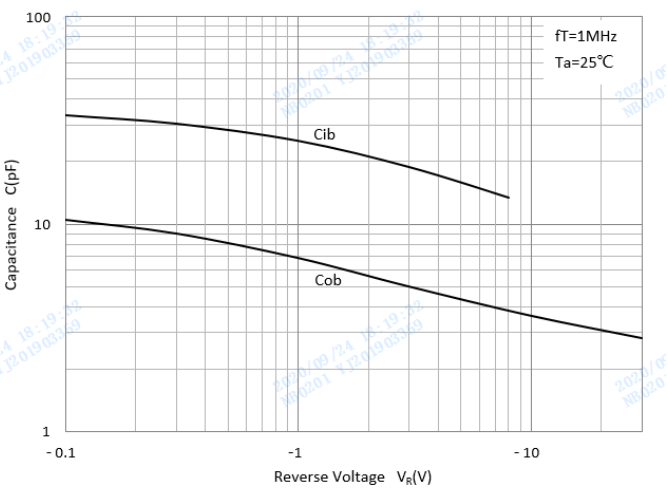
Base-Emitter Saturation Voltage



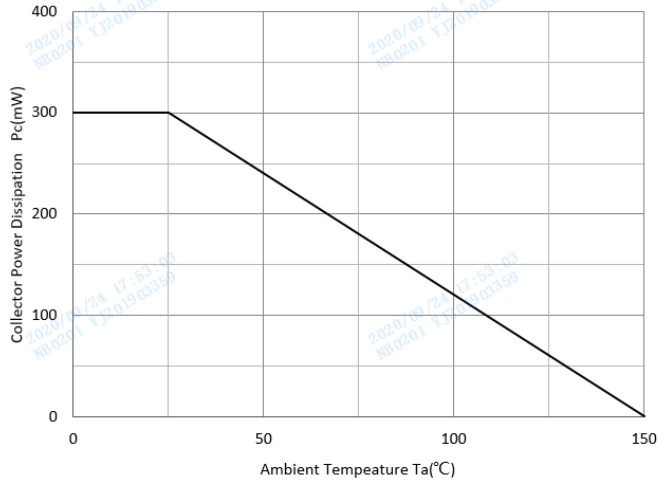
Base-Emitter On Voltage



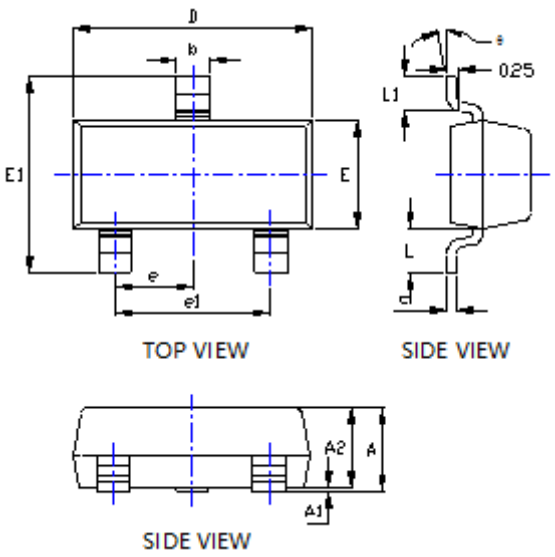
Cob/Cib-V_{CB}/V_{EB}



Collector Power Derating Curve



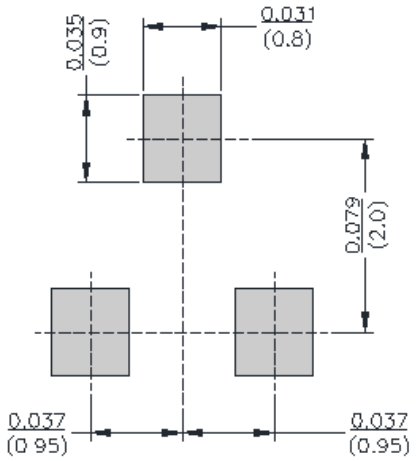
■SOT-23 Package Outline Dimensions



DIMENSIONS				
SYMBOL	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.045	0.900	1.150
A1	0.000	0.004	0.000	0.100
A2	0.035	0.041	0.900	1.050
b	0.012	0.020	0.300	0.500
c	0.004	0.008	0.100	0.200
D	0.110	0.118	2.800	3.000
E	0.047	0.055	1.200	1.400
E1	0.089	0.100	2.250	2.550
e	0.037TYP		0.950TYP	
e1	0.071	0.079	1.800	2.000
L	0.022REF		0.550REF	
L1	0.012	0.020	0.300	0.500
θ	0°	8°	0°	8°

Note:
1. All dimensions are in millimeters (mm) unless otherwise specified.
[所有尺寸均以毫米为单位，除非另有说明]
2. General tolerances: ±0.10mm unless otherwise specified.
[通用公差为±0.10mm，除非另有说明]
3. Dimensions and tolerances per ASME Y14.5M-2018.
[尺寸和公差遵循 ASME Y14.5M-2018 标准]
4.All dimensions shown are exclusive of burrs and gate residues. Burrs and gate vestiges shall not exceed 0.15 mm in maximum.
[所有尺寸均不包括毛刺和浇口残留。毛刺与浇口残留的尺寸最大不得超过 0.15mm]
5.Dimension b does not include dambar protrusion of max 0.100 mm per side.
[尺寸b不包括单边最大0.100 MM的中筋凸出部分]
6.Dimensions D and E are the overall extreme outer dimensions of the mold compound. These dimensions exclude mold flash, lead flash, protrusions and burrs but include the maximum allowable mold mismatch.
[D和E是塑封体的外部极限尺寸，不包括包封溢料、内引线溢料、凸出部分以及胶体毛刺，但是包含了包封错位的最大尺寸]
7.Formed leads shall be planar with respect to one another within a maximum of 0.076 mm relative to the seating plane.
[成型的管脚应为同一平面，共面性最大为0.1mm]

■SOT-23 Soldering Footprint



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