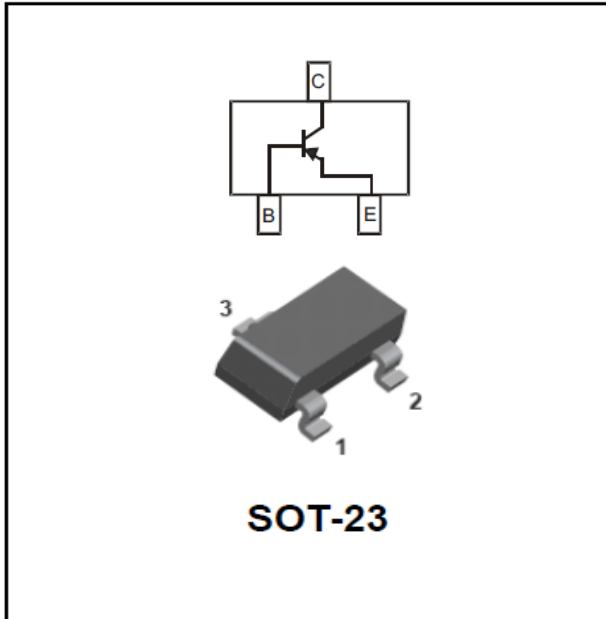


## PNP General Purpose Amplifier



### Features

- Epoxy meets UL-94 V-0 flammability rating
- Halogen free available upon request by adding suffix "HF"
- Moisture Sensitivity Level 1
- Marking: 2T

### ■ Maximum Ratings (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Value
Collector-Base Voltage	$V_{CBO}$	V	-40
Collector-Emitter Voltage	$V_{CEO}$	V	-40
Emitter-Base Voltage	$V_{EBO}$	V	-5
Collector Current	$I_C$	A	-0.6
Collector Power Dissipation	$P_C$	mW	300
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	°C/W	417
Operation Junction Temperature	$T_j$	°C	-55 to +150
Storage Temperature	$T_{stg}$	°C	-55 to +150

### ■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MMBT4403	F2	Approximate 0.008	3000	30000	120000	7" reel



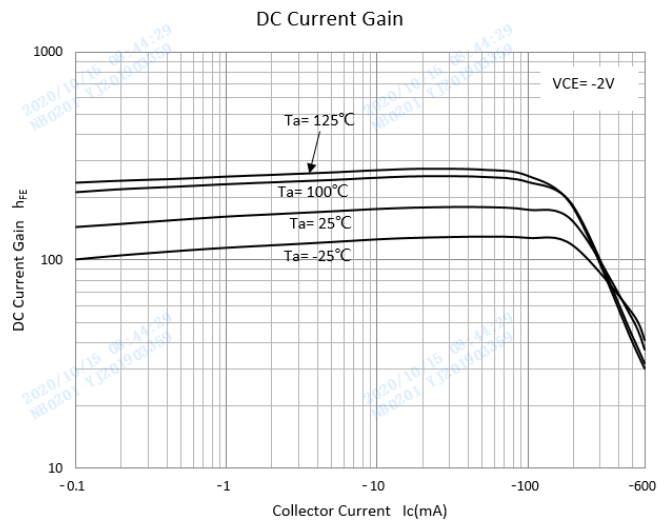
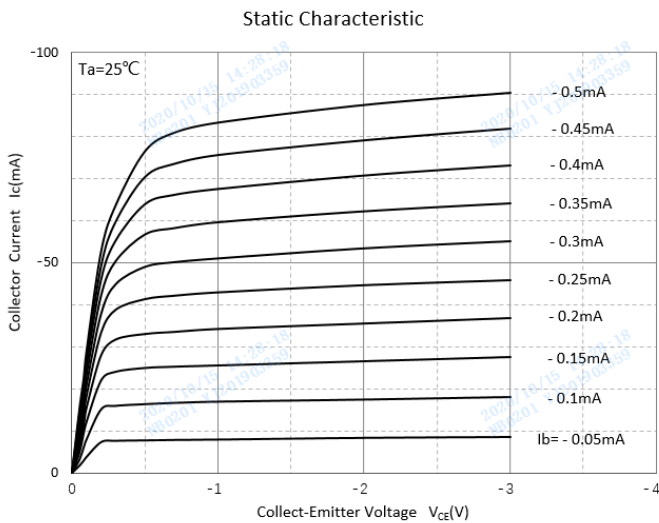
■ Electrical Characteristics (Ta=25°C unless otherwise noted)

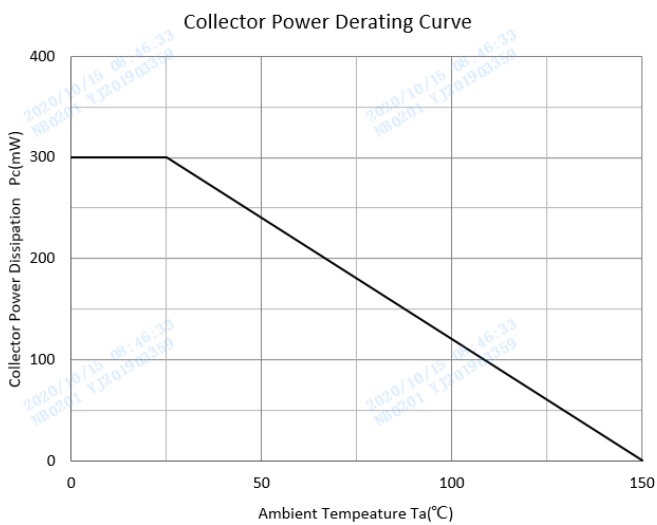
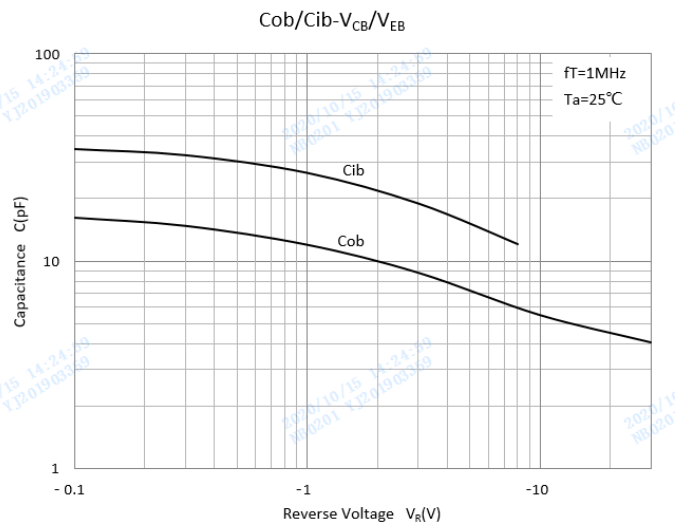
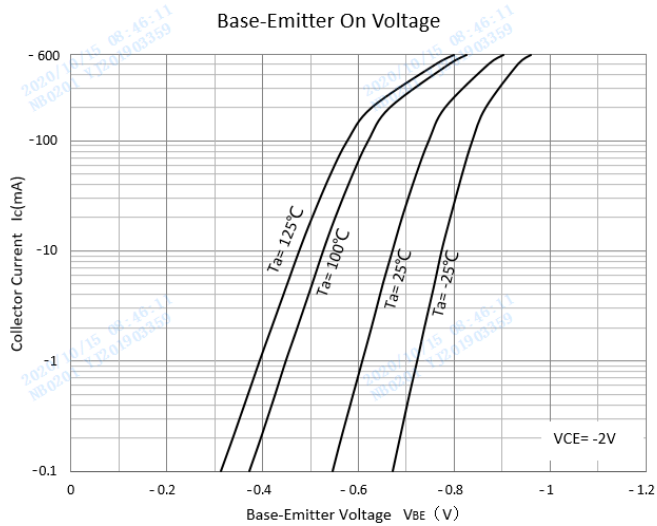
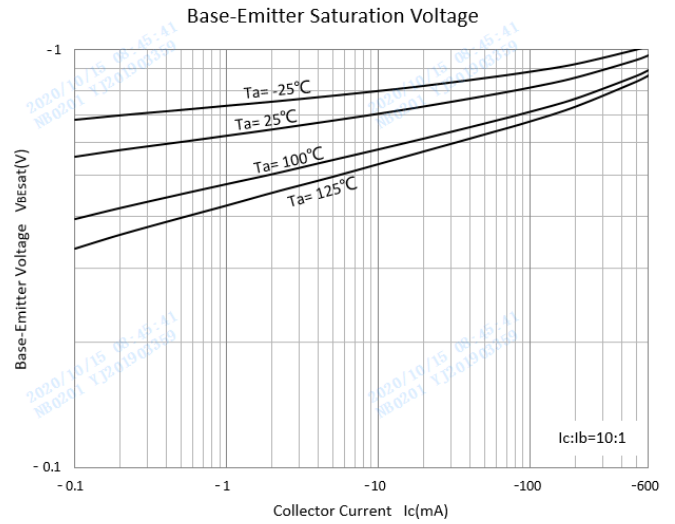
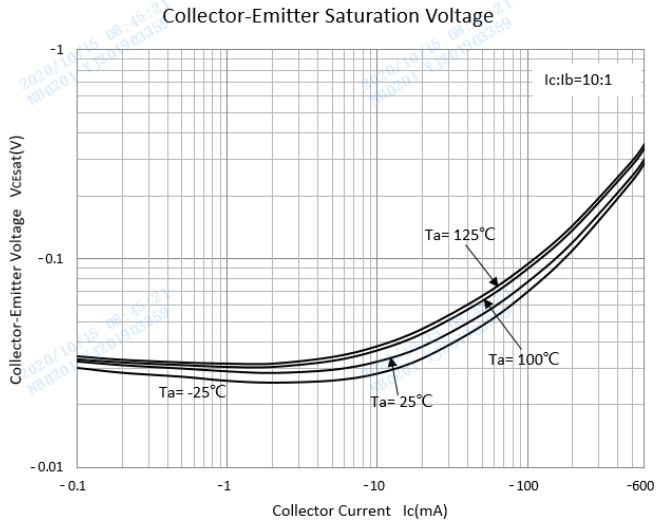
Item	Symbol	Unit	Conditions	Min	Max
Collector-base breakdown voltage	$V_{CBO}$	V	$I_C=-100\mu A, I_E=0$	-40	
Collector-emitter breakdown voltage	$V_{CEO}$	V	$I_C=-1mA, I_B=0$	-40	
Emitter-base breakdown voltage	$V_{EBO}$	V	$I_E=-100\mu A, I_C=0$	-5	
Collector-Base cut-off current	$I_{CBO}$	$\mu A$	$V_{CB}=-35V, I_E=0$		-0.1
Collector-emitter cut-off current	$I_{CEO}$	$\mu A$	$V_{CE}=-35V, I_B=0$		-0.1
Emitter-base cut-off current	$I_{EBO}$	$\mu A$	$V_{EB}=-4V, I_C=0V$		-0.1
DC current gain	$h_{FE}$	V	$V_{CE}=-2V, I_C=-150mA$	100	300
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	$I_C=-150mA, I_B=-15mA$		-0.4
Base-emitter saturation voltage	$V_{BE(sat)}$	V	$I_C=-150mA, I_B=-15mA$		-0.95

■ Electrical Characteristics (Ta=25°C unless otherwise noted)

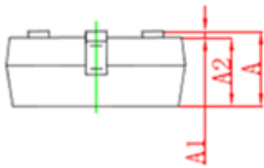
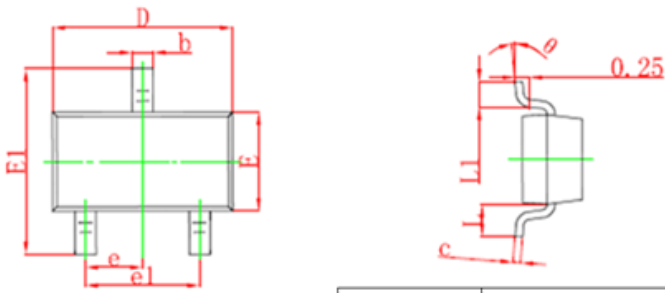
Item	Symbol	Unit	Conditions	Min	Max
Transition frequency	$f_t$	MHz	$V_{CE}=-10V, I_C=-20mA, f=100MHz$	200	
Delay time	$t_d$	ns	$V_{CC}=-30V, V_{EB}=-2V$ $I_C=-150mA, I_{B1}=-15mA$		15
Rise time	$t_r$	ns			20
Storage time	$t_s$	ns	$V_{CC}=-30V, I_C=-150mA,$ $I_{B1}= I_{B2}=-15mA$		225
Fall time	$t_f$	ns			60

■ Characteristics (Typical)



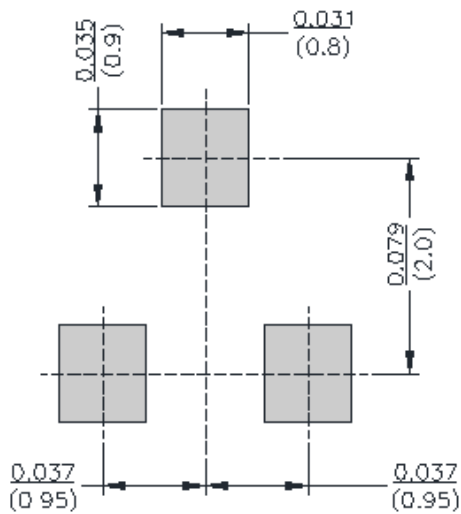


## ■SOT-23 Package Outline Dimensions



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





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