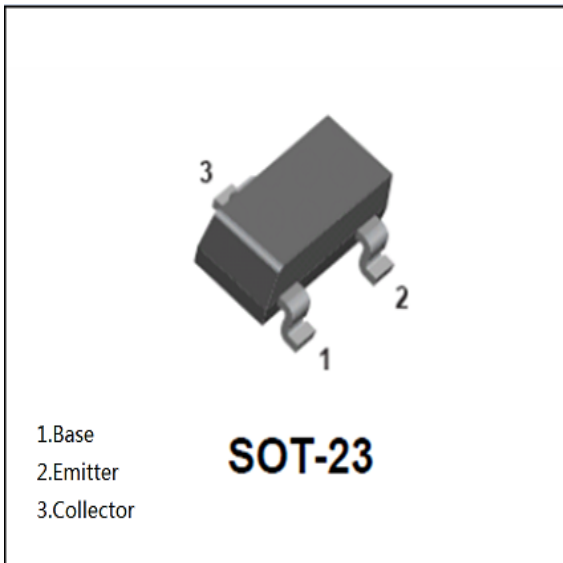


## PNP Silicon High Voltage Transistor



### Features

- Epoxy meets UL-94 V-0 flammability rating
- Halogen free available upon request by adding suffix "HF"
- Moisture Sensitivity Level 1
- Surface mount package ideally Suited for Automatic Insertion
- PNP

### Mechanical Data

- **Package:** SOT-23
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** 2D

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

Item	Symbol	Unit	Conditions	Value
Collector-Base Voltage	$V_{CBO}$	V	$I_C = -100\mu A, I_E = 0$	-300
Collector-Emitter Voltage	$V_{CEO}$	V	$I_C = -1mA, I_B = 0$	-300
Emitter-Base Voltage	$V_{EBO}$	V	$I_E = -100\mu A, I_C = 0$	-5
Collector Current	$I_C$	mA		-300
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

### ■ Other Characteristics (Ta=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	Max
Transition frequency	$f_t$	MHz	$V_{CE} = -20V, I_C = -10mA, f = 30MHz$	50	

### ■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MMBTA92	F2	Approximate 0.009	3000	30000	120000	7" reel

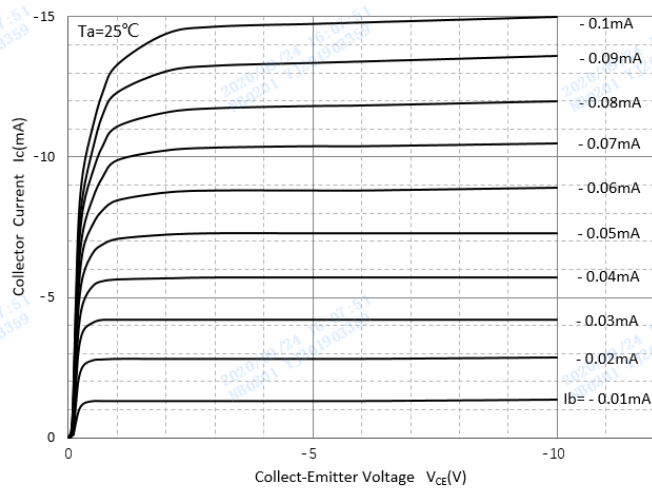


## ■Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

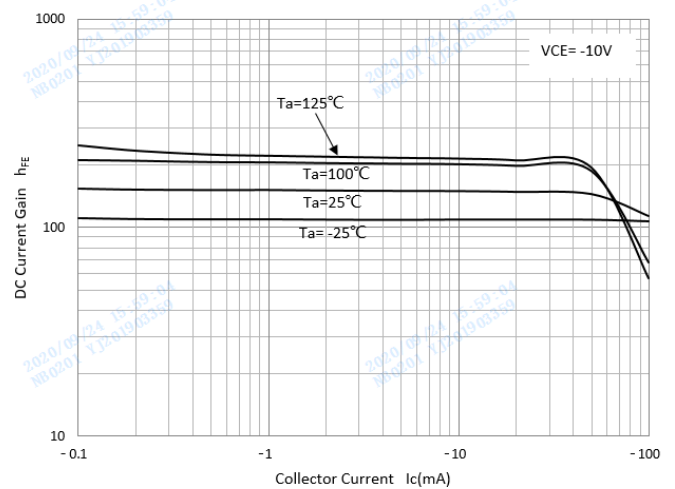
Item	Symbol	Unit	Conditions	Min	Max
Collector-base breakdown voltage	V <sub>CBO</sub>	V	I <sub>C</sub> =-100μA, I <sub>E</sub> =0	-300	
Collector-emitter breakdown voltage	V <sub>CEO</sub>	V	I <sub>C</sub> =-1mA, I <sub>B</sub> =0	-300	
Emitter-base breakdown voltage	V <sub>EBO</sub>	V	I <sub>E</sub> =-100μA, I <sub>C</sub> =0	-5	
Collector-base cut-off current	I <sub>CBO</sub>	nA	V <sub>CB</sub> =-200V, I <sub>E</sub> =0		-250
Emitter-base cut-off current	I <sub>EBO</sub>	nA	V <sub>EB</sub> =-5V, I <sub>C</sub> =0		-100
DC current gain	h <sub>FE</sub>		V <sub>CE</sub> =-10V, I <sub>C</sub> =-1mA	60	
	h <sub>FE</sub>		V <sub>CE</sub> =-10V, I <sub>C</sub> =-10mA	100	200
	h <sub>FE</sub>		V <sub>CE</sub> =-10V, I <sub>C</sub> =-30mA	60	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	V	I <sub>C</sub> =-20mA, I <sub>B</sub> =-2mA		-0.2
Base-emitter saturation voltage	V <sub>BE(sat)</sub> *	V	I <sub>C</sub> =-20mA, I <sub>B</sub> =-2mA		-0.9

## ■Characteristics(Typical)

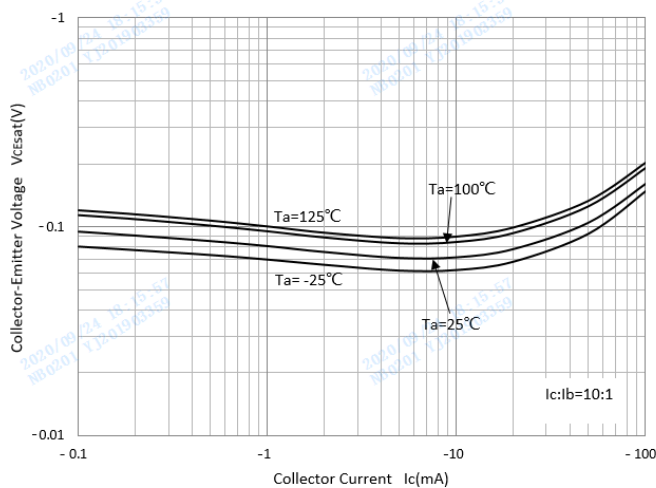
Static Characteristic



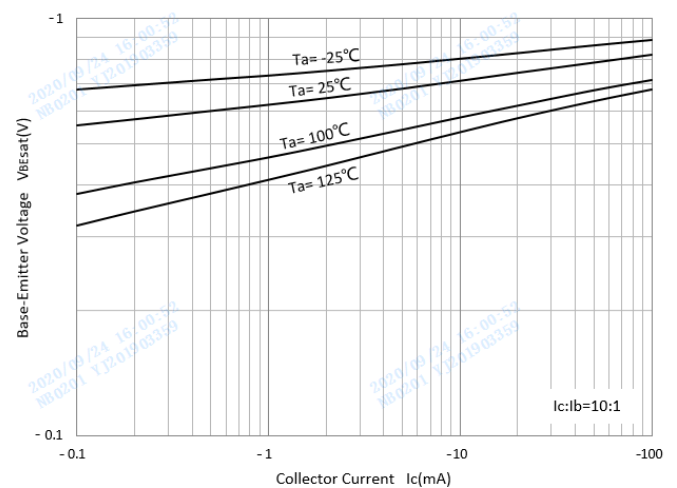
DC Current Gain

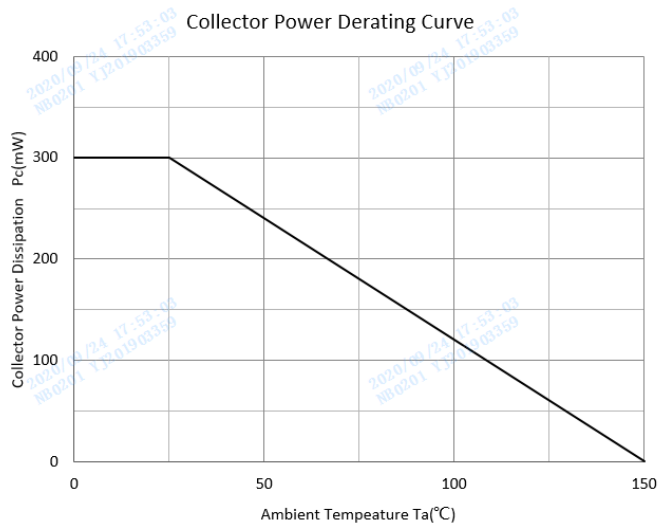
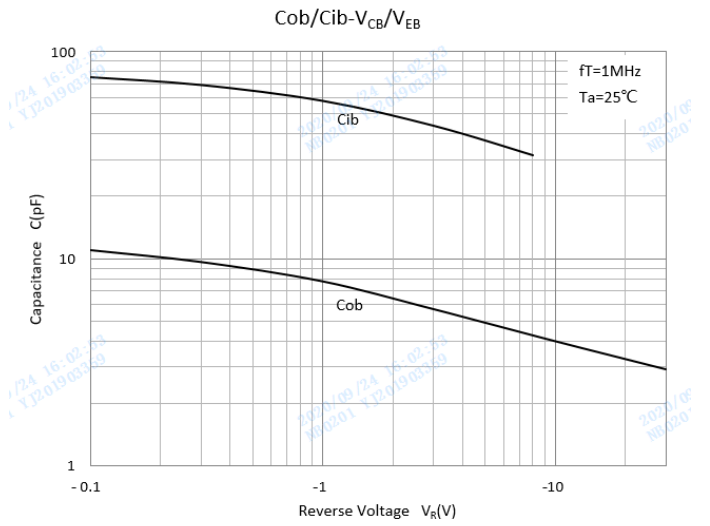
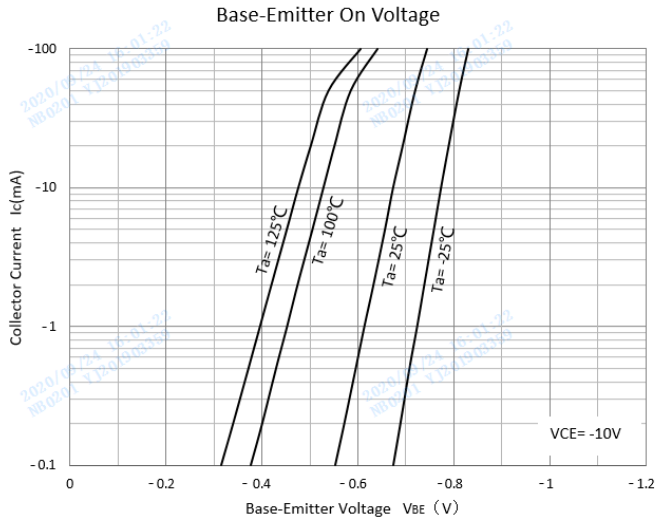


Collector-Emitter Saturation Voltage

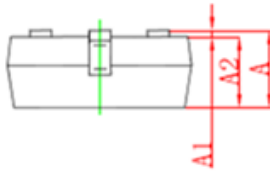
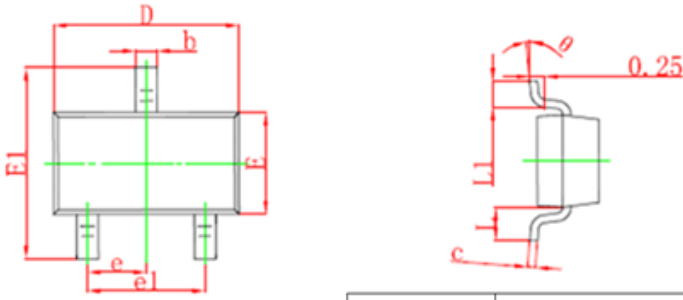


Base-Emitter Saturation Voltage



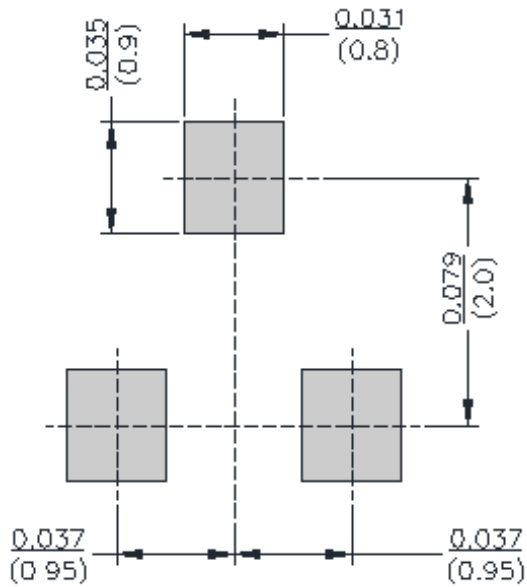


## ■SOT-23 Package Outline Dimensions



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
ø	0°	8°	0°	8°

## ■SOT-23 Soldering Footprint





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