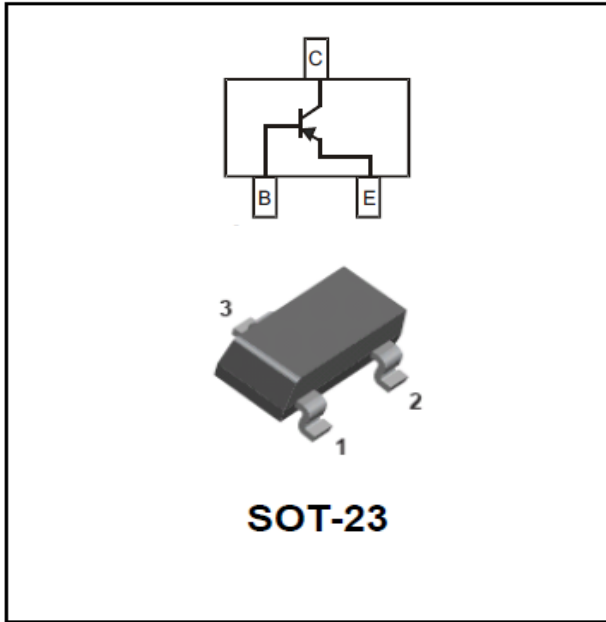


## PNP General Purpose Amplifier



### Features

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

### Mechanical Data

- **Package:** SOT-23  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** 2F

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

Item	Symbol	Unit	Conditions	Value
Collector-Base Voltage	$V_{CB0}$	V		-60
Collector-Emitter Voltage	$V_{CE0}$	V		-60
Emitter-Base Voltage	$V_{EB0}$	V		-5
Collector Current	$I_C$	A		-0.6
Collector Power Dissipation	$P_C$	W		0.3
Junction Temperature	$T_j$	°C		-55 to +150
Storage Temperature	$T_{stg}$	°C		-55 to +150



### ■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	IC=-10μA,IE=0	-60	
Collector-emitter breakdown voltage	V <sub>CEO</sub>	V	IC=-10mA,IB=0	-60	
Emitter-base breakdown voltage	V <sub>EBO</sub>	V	IE=-10μA,IC=0	-5	
Collector-base cut-off current	I <sub>CBO</sub>	μA	V <sub>CB</sub> =-50V,IE=0		-0.1
Collector-emitter cut-off current	I <sub>CEX</sub>	μA	V <sub>CE</sub> =-30V, V <sub>BE</sub> =-0.5V		-0.05
DC current gain	h <sub>FE</sub>		V <sub>CE</sub> =-10V,IC=-0.1mA	75	
	h <sub>FE</sub>		V <sub>CE</sub> =-10V,IC=-1mA	100	
	h <sub>FE</sub>		V <sub>CE</sub> =-10V,IC=-10mA	100	
	h <sub>FE</sub>		V <sub>CE</sub> =-10V,IC=-150mA	100	300
	h <sub>FE</sub>		V <sub>CE</sub> =-10V,IC=-500mA	50	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	V	IC=-150mA,IB=-15mA		-0.4
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	V	IC=-500mA,IB=-50mA		-1.6
Base-emitter saturation voltage	V <sub>BE(sat)*</sub>	V	IC=-150mA,IB=-15mA		-1.3
Base-emitter saturation voltage	V <sub>BE(sat)*</sub>	V	IC=-500mA,IB=-50mA		-2.6

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

Item	Symbol	Unit	Conditions	Min	Max
Transition frequency	F <sub>t</sub>	MHz	V <sub>CE</sub> =-20V,IC=-50mA,f=100MHz	200	
Delay time	t <sub>d</sub>	ns	V <sub>CC</sub> =-30V,IC=-150mA, IB1=-15mA		10
Rise time	t <sub>r</sub>	ns			
Storage time	t <sub>s</sub>	ns	V <sub>CC</sub> =-6V,IC=-150mA, IB1= IB2=-15mA		80
Fall time	t <sub>f</sub>	ns			

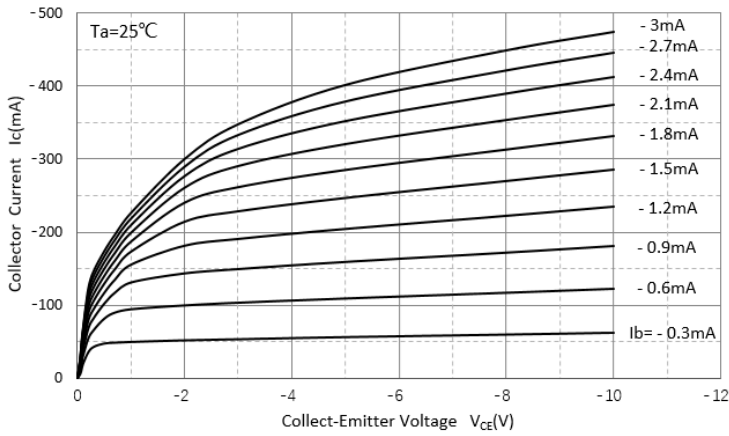
### ■Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MMBT2907A	F2	Approximate 0.008	3000	30000	120000	7" reel

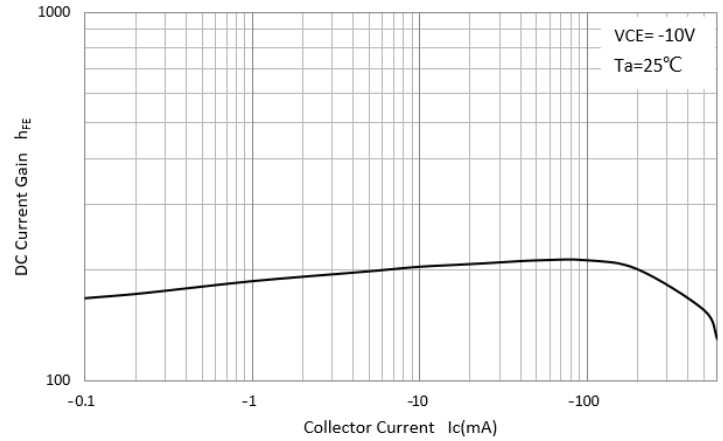


## ■ Characteristics(Typical)

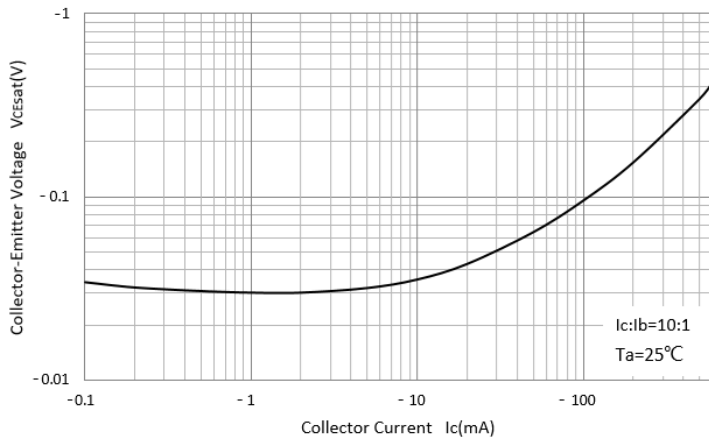
### Static Characteristic



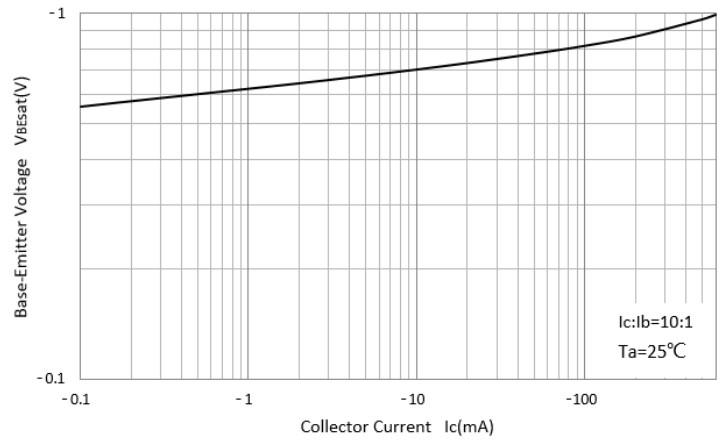
### DC Current Gain



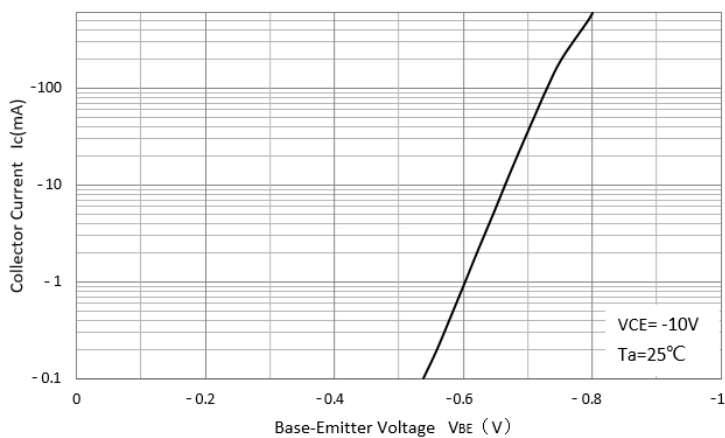
### Collector-Emitter Saturation Voltage



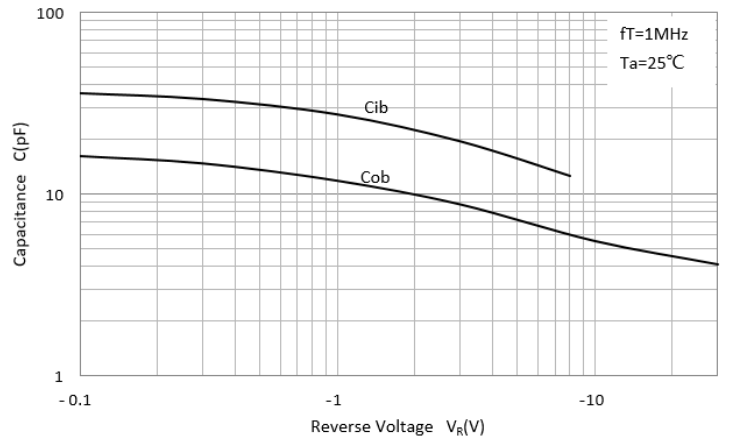
### Base-Emitter Saturation Voltage



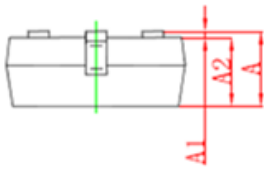
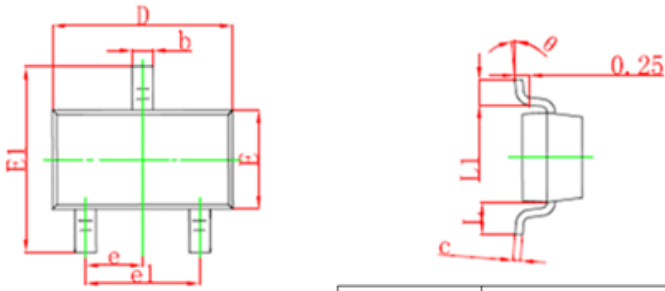
### Base-Emitter On Voltage



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

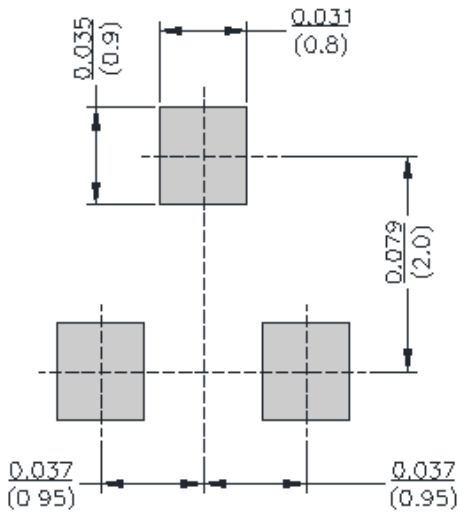


## ■SOT-23 Package Outline Dimensions



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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