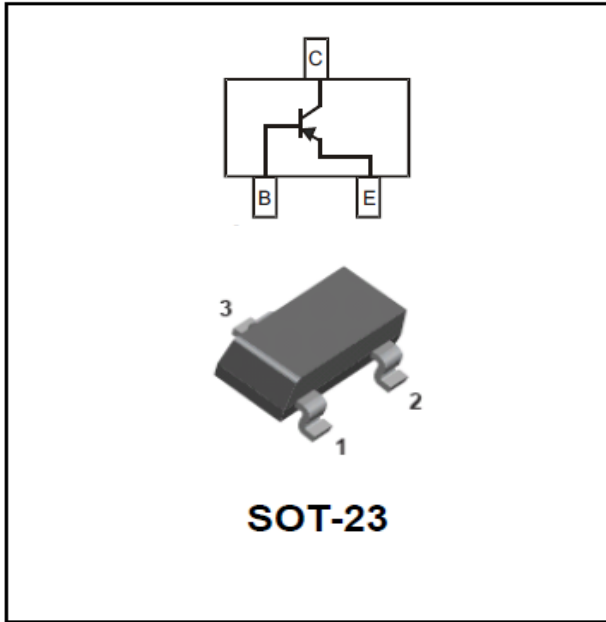


PNP General Purpose Amplifier



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_a=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	Max
Collector-base breakdown voltage	V _{CBO}	V	IC=-10μA,IE=0	-60	
Collector-emitter breakdown voltage	V _{CEO}	V	IC=-10mA,IB=0	-60	
Emitter-base breakdown voltage	V _{EBO}	V	IE=-10μA,IC=0	-5	
Collector-base cut-off current	I _{CBO}	μA	V _{CB} =-50V,IE=0		-0.1
Collector-emitter cut-off current	I _{CEX}	μA	V _{CE} =-30V, V _{BE} =-0.5V		-0.05
DC current gain	h _{FE}		V _{CE} =-10V,IC=-0.1mA	75	
	h _{FE}		V _{CE} =-10V,IC=-1mA	100	
	h _{FE}		V _{CE} =-10V,IC=-10mA	100	
	h _{FE}		V _{CE} =-10V,IC=-150mA	100	300
	h _{FE}		V _{CE} =-10V,IC=-500mA	50	
Collector-emitter saturation voltage	V _{CE(sat)}	V	IC=-150mA,IB=-15mA		-0.4
Collector-emitter saturation voltage	V _{CE(sat)}	V	IC=-500mA,IB=-50mA		-1.6
Base-emitter saturation voltage	V _{BE(sat)*}	V	IC=-150mA,IB=-15mA		-1.3
Base-emitter saturation voltage	V _{BE(sat)*}	V	IC=-500mA,IB=-50mA		-2.6

■Electrical Characteristics (T_a=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	Max
Transition frequency	F _t	MHz	V _{CE} =-20V,IC=-50mA,f=100MHz	200	
Delay time	t _d	ns	V _{CC} =-30V,IC=-150mA, IB1=-15mA		10
Rise time	t _r	ns			40
Storage time	t _s	ns	V _{CC} =-6V,IC=-150mA, IB1= IB2=-15mA		80
Fall time	t _f	ns			30

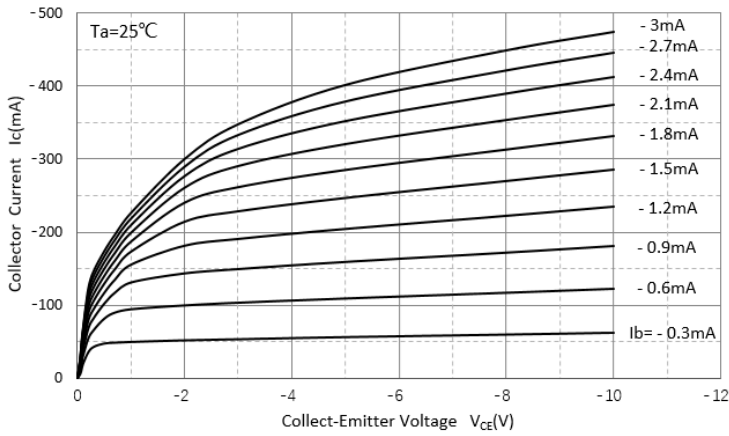
■Ordering Information (Example)

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

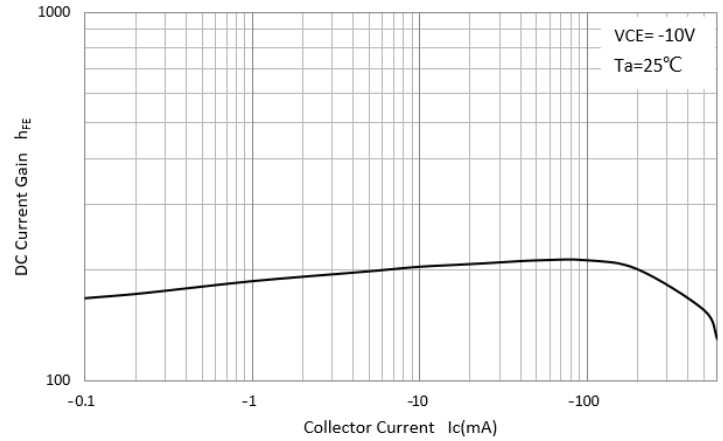


■ Characteristics(Typical)

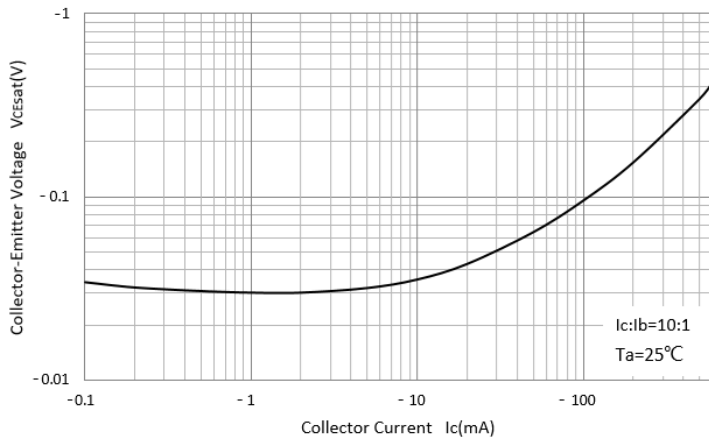
Static Characteristic



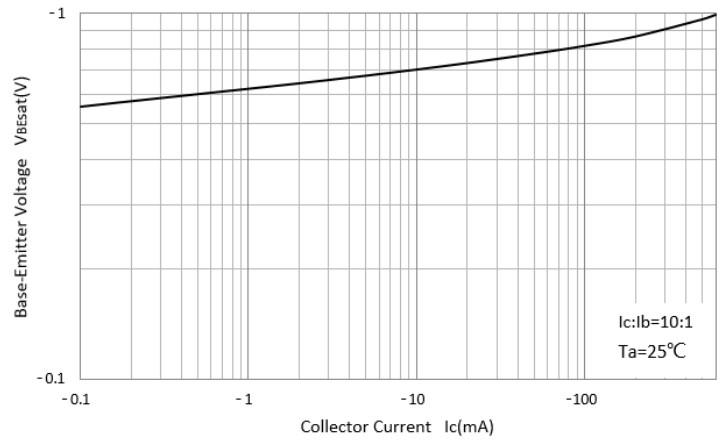
DC Current Gain



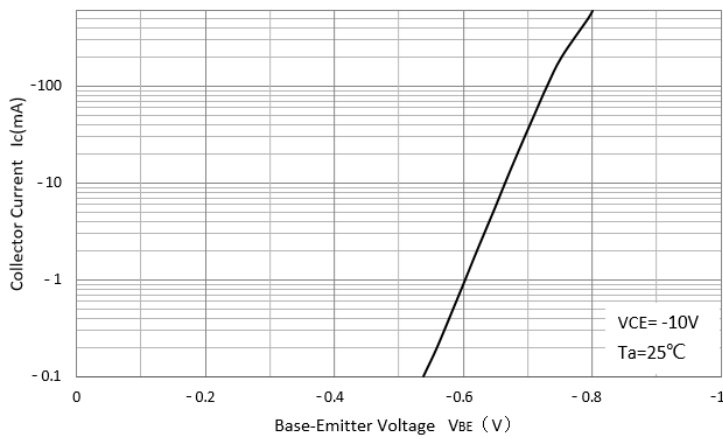
Collector-Emittor Saturation Voltage



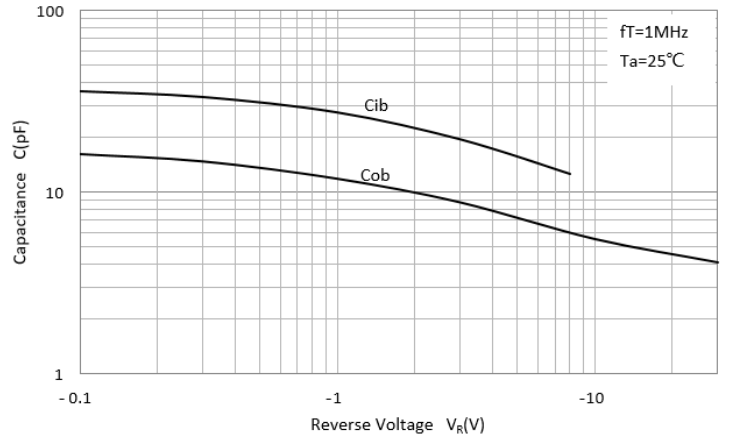
Base-Emittor Saturation Voltage



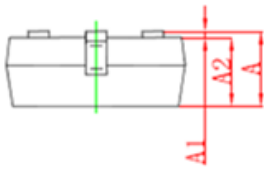
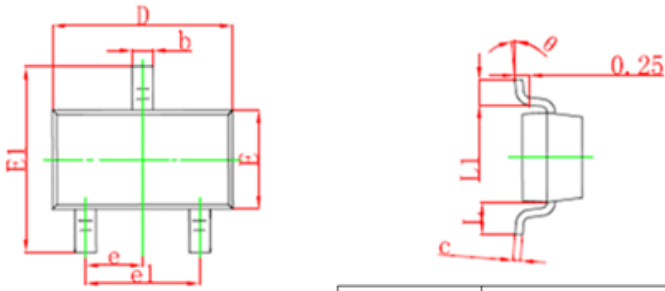
Base-Emittor On Voltage



Cob/Cib-Vcb/Veb

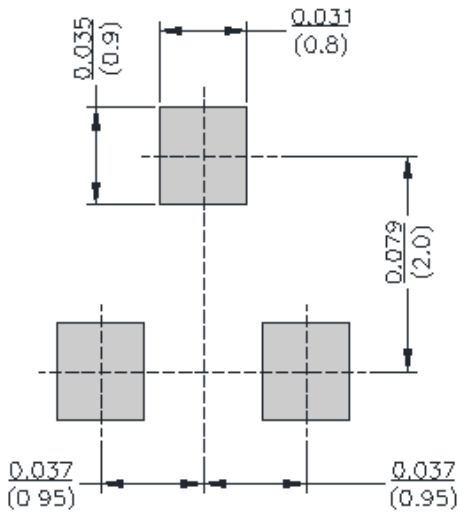


■SOT-23 Package Outline Dimensions



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





Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.