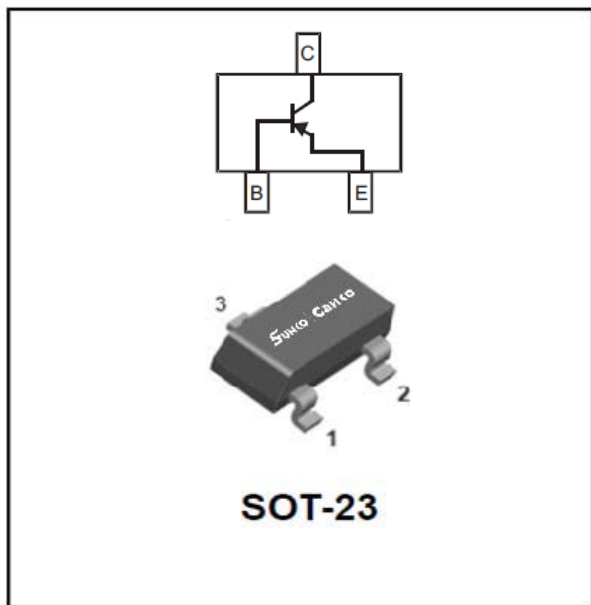


PNP General Purpose Amplifier



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, -compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** M2B

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

Item	Symbol	Unit	Conditions	Value
Collector-Base Voltage	V_{CBO}	V		-60
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	W		0.25
Junction Temperature	T_J	°C		-55 to +150
Storage Temperature	T_{stg}	°C		-55 to +150

MMBT2907

■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	-40	
Emitter-base breakdown voltage	V _{EBO}	V	IE=-10μA, IC=0	-5	
Collector-base cut-off current	I _{CBO}	nA	VCB=-50V, IE=0		-20
Base cut-off current	I _{EBO}	nA	VCE=-3V, IC=0		-10
Collector-emitter cut-off current	I _{CEX}	nA	VCE=-30V, VBE=-0.5V		-50
DC current gain	h _{FE}		VCE=-10V, IC=-0.1mA	52	
	h _{FE}		VCE=-10V, IC=-150mA	100	300
	h _{FE}		VCE=-10V, IC=-500mA	32	
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		-0.67
Base-emitter saturation voltage	V _{BE(sat)*}	V	IC=-150mA, IB=-15mA		-1
Base-emitter saturation voltage	V _{BE(sat)*}	V	IC=-500mA, IB=-50mA		-1.2

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

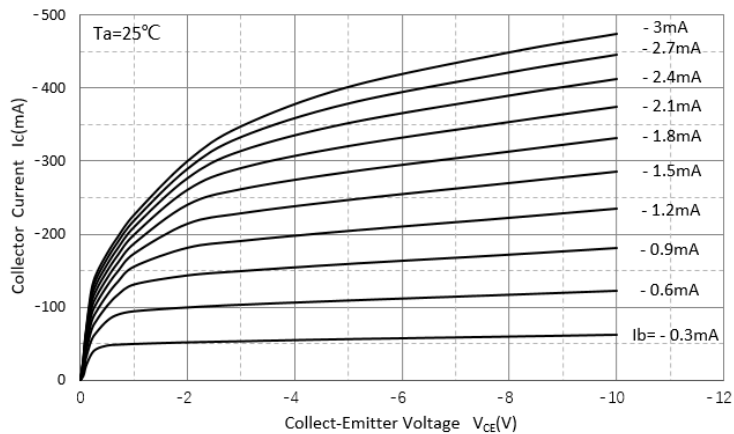
Item	Symbol	Unit	Conditions	Min	Max
Transition frequency	F _t	MHz	VCE=-20V, IC=-50mA, f=100MHz	200	
Delay time	t _d	ns	VCC=-30V, IC=-150mA, IB1=-15mA		10
Rise time	t _r	ns			25
Storage time	t _s	ns	VCC=-6V, IC=-150mA, IB1=IB2=-15mA		225
Fall time	t _f	ns			60

■Ordering Information (Example)

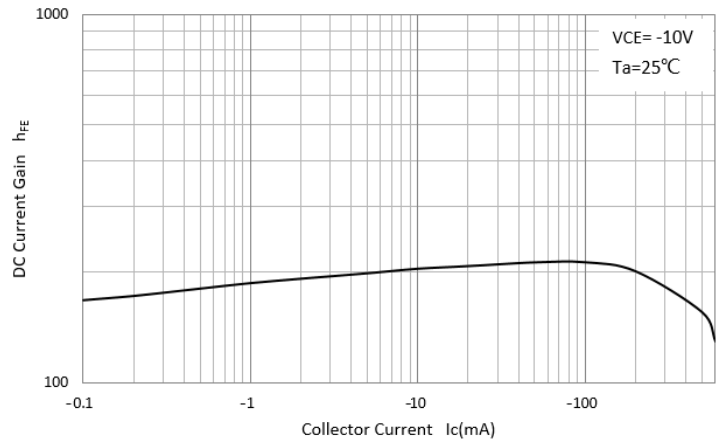
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MMBT2907	F2	Approximate 0.008	3000	30000	120000	7" reel

■Characteristics(Typical)

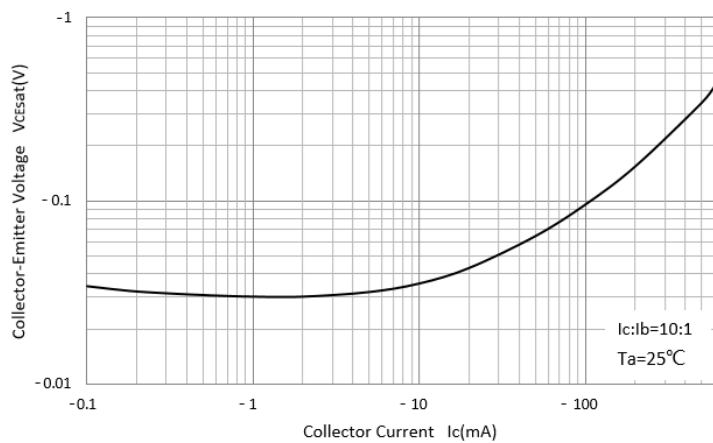
Static Characteristic



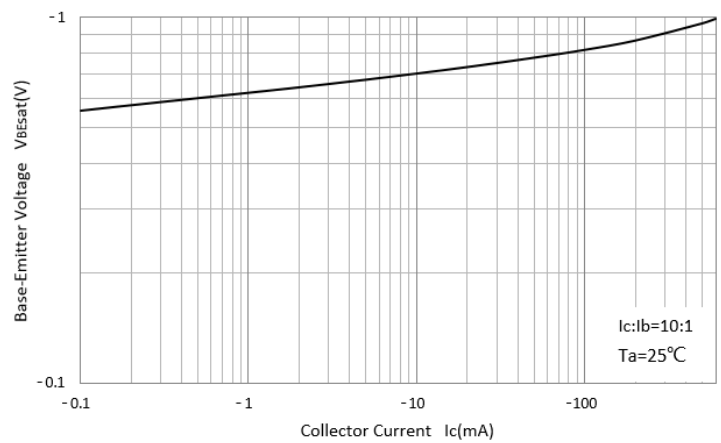
DC Current Gain



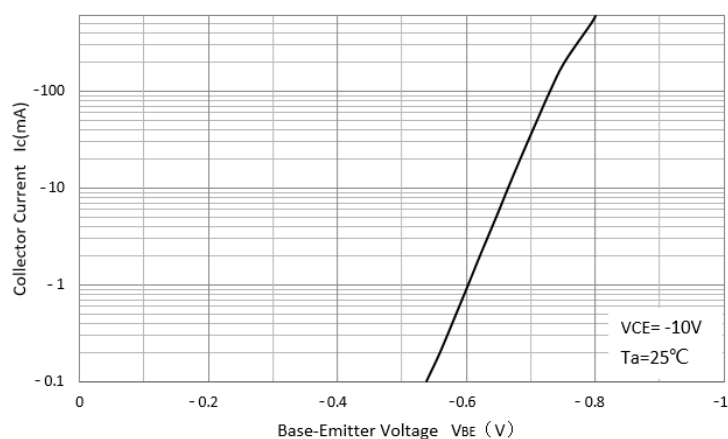
Collector-Emitter Saturation Voltage



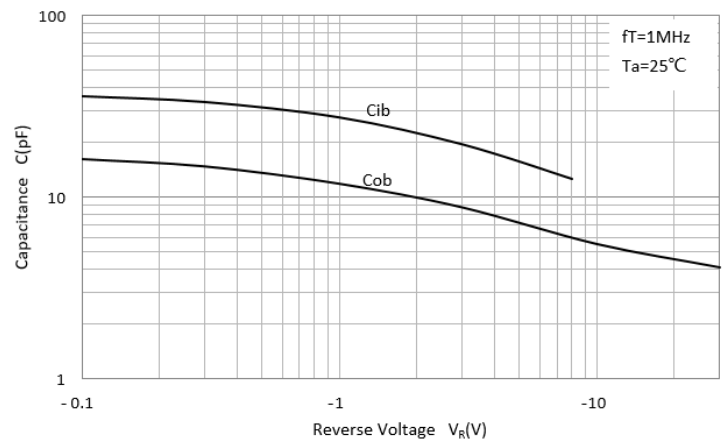
Base-Emitter Saturation Voltage



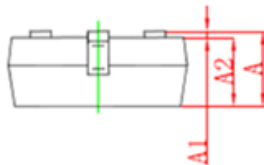
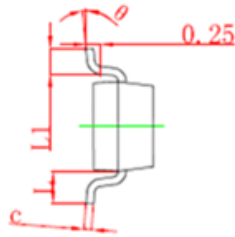
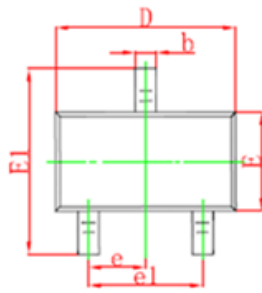
Base-Emitter On Voltage



$C_{ob}/C_{ib}-V_{CB}/V_{EB}$

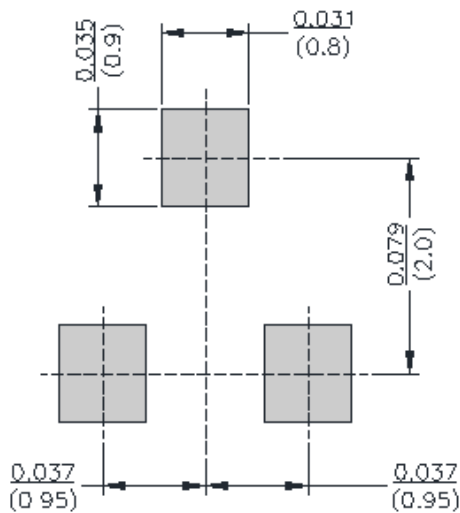


■SOT-23 Package Outline Dimensions



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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