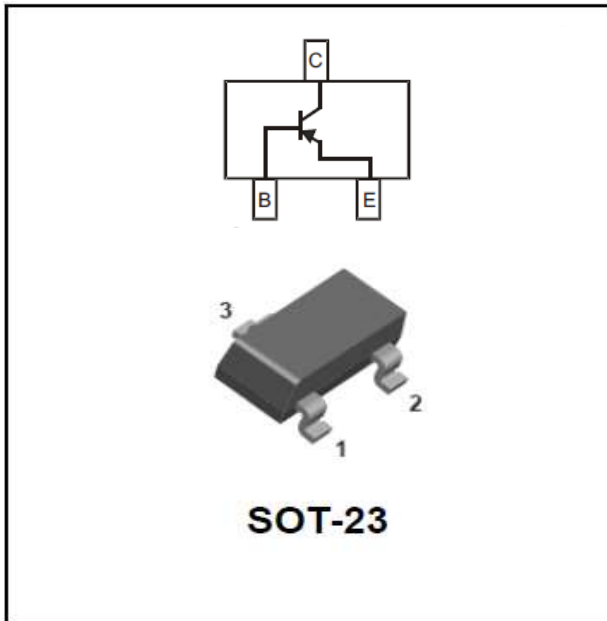


PNP General Purpose Amplifier



Features

- Epoxy meets UL-94 V-0 flammability rating
- 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	VCBO	V		-60
Collector-Emitter Voltage	VCEO	V		-60
Emitter-Base Voltage	VEBO	V		-5
Collector Current -Continuous	IC	A		-0.6
Total Device Dissipation	PC	W		0.3
Junction Temperature	Tj	°C		-55 to +150
Storage Temperature	TSTG	°C		-55 to +150

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

Item	Symbol	Unit	Conditions	Min	Max
Collector-base breakdown voltage	V _{(BR)CBO}	V	I _C =-10μA, I _E =0	-60	
Collector-emitter breakdown voltage	V _{(BR)CEO}	V	I _C =-10mA, I _B =0	-60	
Emitter-base breakdown voltage	V _{(BR)EBO}	V	I _E =-10μA, I _C =0	-5	
Collector cut-off current	I _{CBO}	uA	V _{CB} =-50V, I _B =0		-0.1
Collector cut-off current	I _{CEX}	uA	V _{CE} =-30V, V _{BE} =-0.5V,		-0.05
DC current gain	h _{FE}		V _{CE} =-10V, I _C =-0.1mA	75	
	h _{FE}		V _{CE} =-10V, I _C =-1mA	100	
	h _{FE}		V _{CE} =-10V, I _C =-10mA	100	

	h_{FE}		$V_{CE}=-10V, I_C=-150mA$	100	300
	h_{FE}		$V_{CE}=-10V, I_C=-500mA$	50	
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	$I_C=-150mA, I_B=-15mA$		-0.4
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	$I_C=-500mA, I_B=-50mA$		-1.6
Base-emitter saturation voltage	$V_{BE(sat)^*}$	V	$I_C=-150mA, I_B=-15mA$		-1.3
Base-emitter saturation voltage	$V_{BE(sat)^*}$	V	$I_C=-500mA, I_B=-50mA$		-2.6

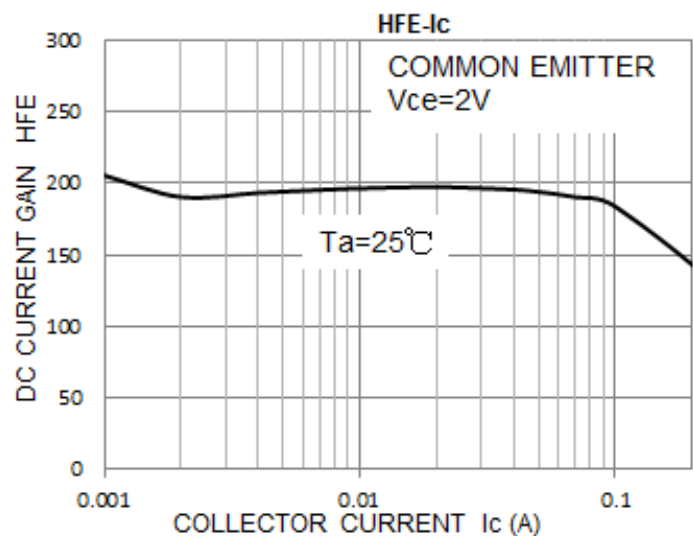
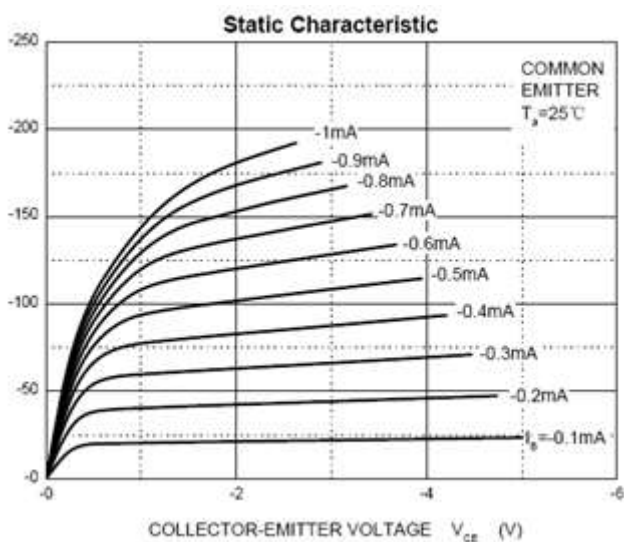
■Electrical Characteristics ($T_a=25^\circ C$ Unless otherwise specified)

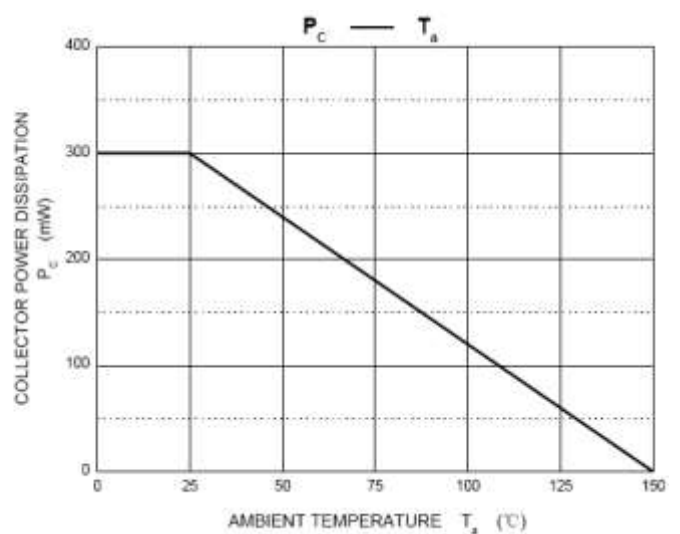
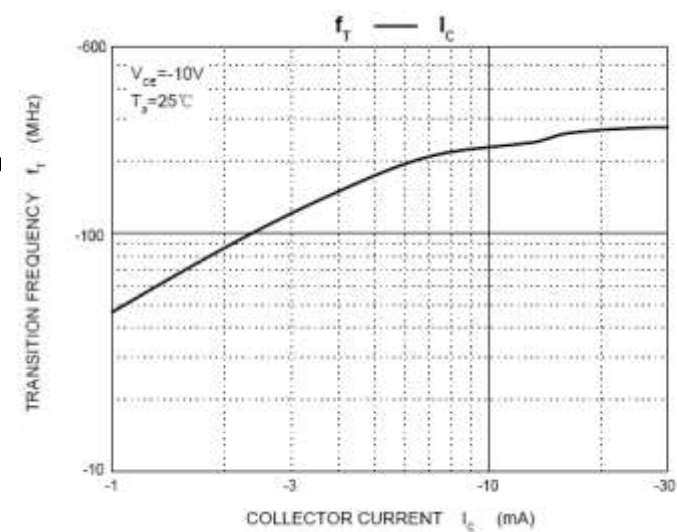
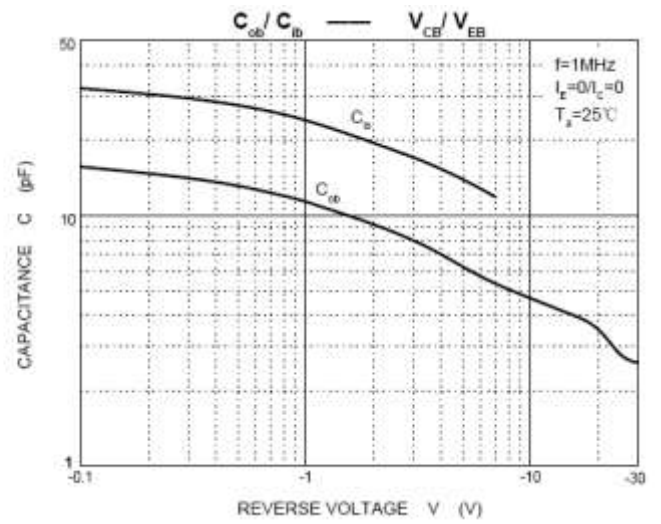
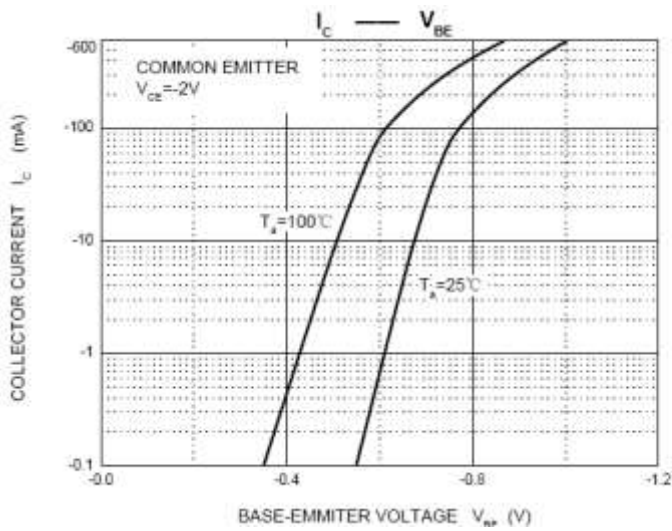
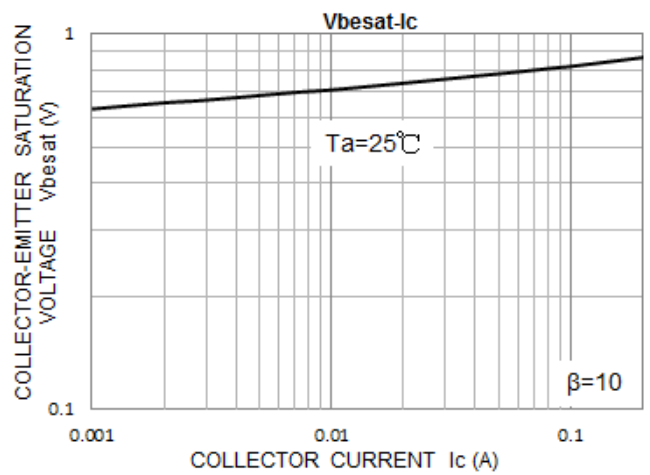
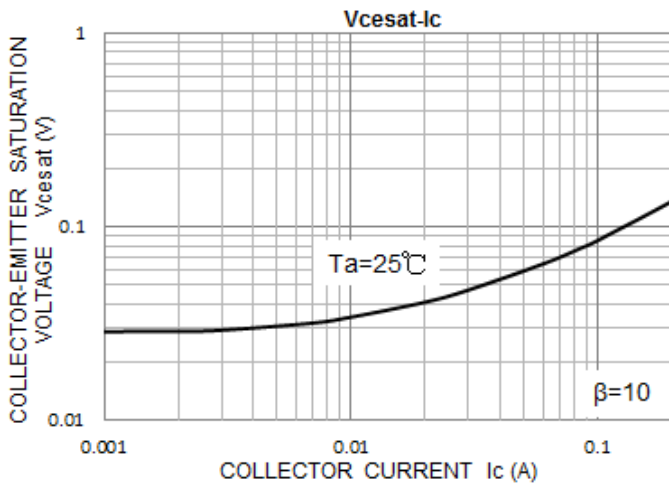
Item	Symbol	Unit	Conditions	Min	Max
Transition frequency	f_t	MHz	$V_{CE}=-20V, I_C=-50mA, f=100MHz$	200	
Delay time	t_d	ns	$V_{CC}=-30V, I_C=-150mA,$ $I_{B1}=-15mA$		10
Rise time	t_r	ns		40	
Storage time	t_s	ns	$V_{CC}=-6V, I_C=-150mA,$ $I_{B1}=-I_{B2}=-15mA$		80
Fall time	t_f	ns		30	

■Ordering Information (Example)

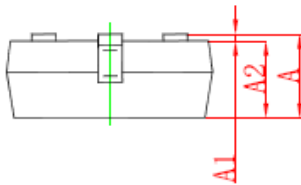
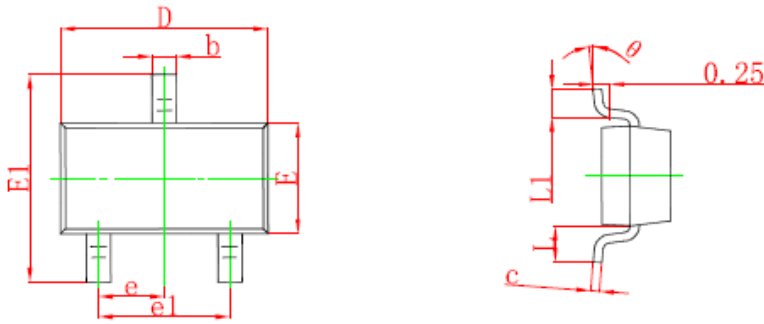
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MMBT2907A	F2	Approximate 0.008	3000	30000	120000	7" reel

■Characteristics(Typical)



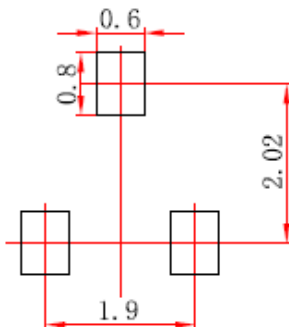


■SOT-23 Package Outline Dimensions



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	0.080	0.150	0.003	0.006
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	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

■SOT-23 Suggested Pad Layout



- Note:
1. Controlling dimension: In millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.

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