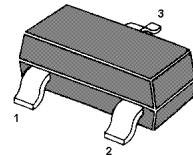


SOT-23 Plastic-Encapsulate Transistors

MMBT2907A TRANSISTOR (PNP)

FEATURES

- Epitaxial planar die construction
- Complementary NPN Type available(MMBT2222A)



1. Base 2. Emitter 3. Collector
SOT-23 Plastic Package

Marking: 2F

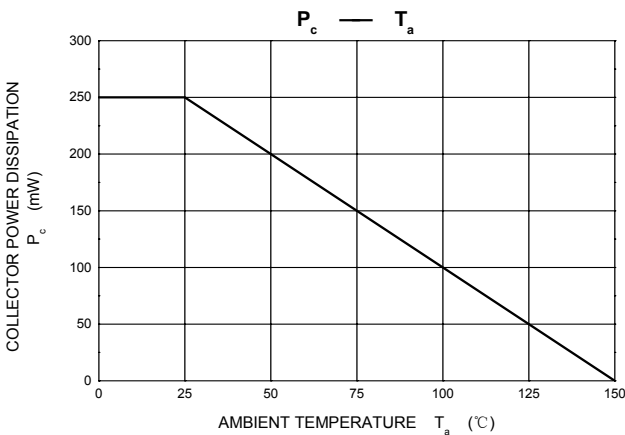
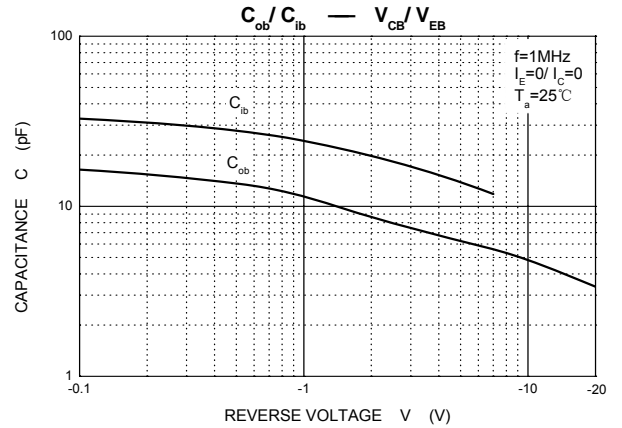
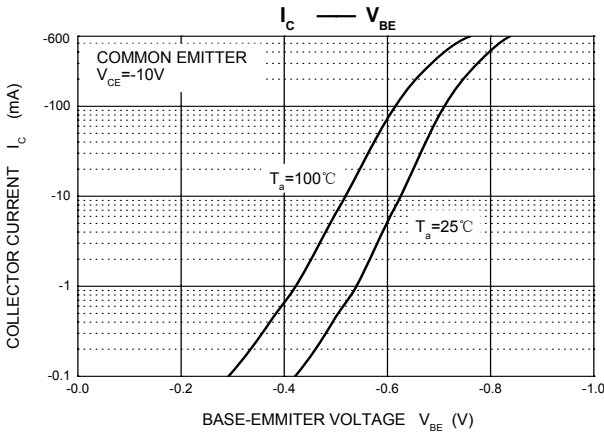
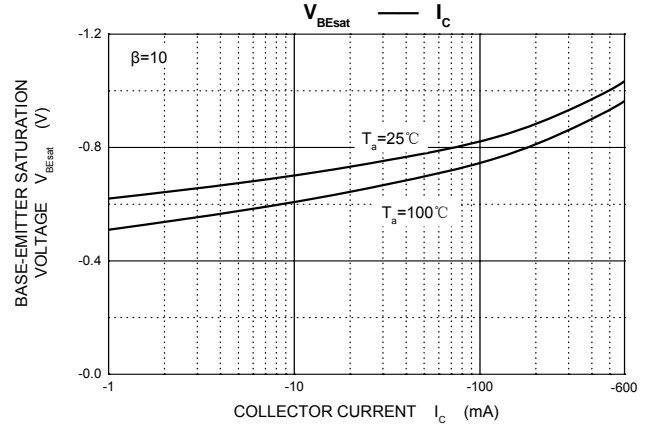
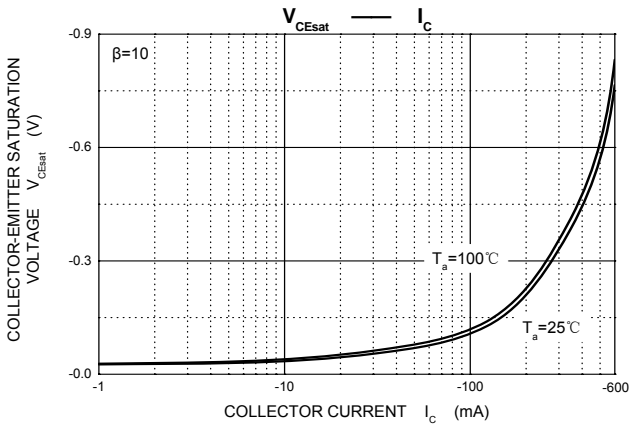
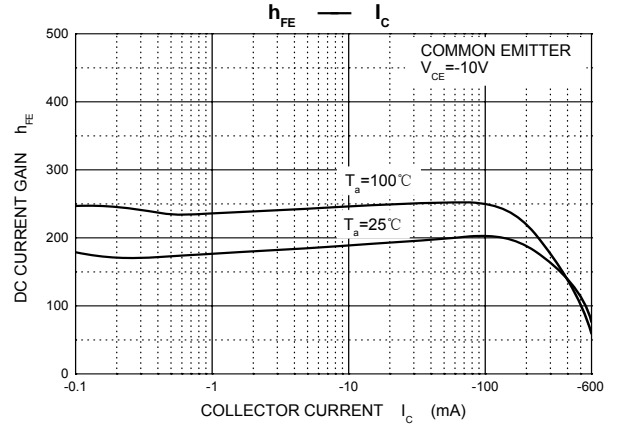
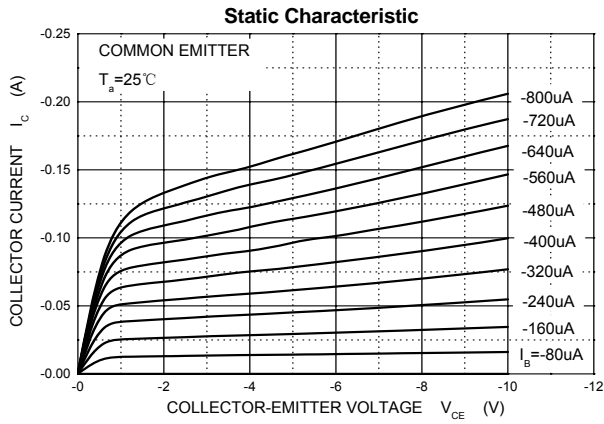
MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CB0}	Collector-Base Voltage	-60	V
V_{CE0}	Collector-Emitter Voltage	-60	V
V_{EB0}	Emitter-Base Voltage	-5	V
I_c	Collector Current -Continuous	-600	mA
P_D	Total Device Dissipation	250	mW
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	500	$^\circ\text{C}/\text{W}$
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_c=-10\mu\text{A}, I_E=0$	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}^*$	$I_c=-10\text{mA}, I_B=0$	-60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-10\mu\text{A}, I_c=0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB}=-50\text{V}, I_E=0$			-10	nA
DC current gain	$h_{FE(1)}^*$	$V_{CE}=-10\text{V}, I_c=-0.1\text{mA}$	75			
	$h_{FE(2)}^*$	$V_{CE}=-10\text{V}, I_c=-1\text{mA}$	100			
	$h_{FE(3)}^*$	$V_{CE}=-10\text{V}, I_c=-10\text{mA}$	100			
	$h_{FE(4)}^*$	$V_{CE}=-10\text{V}, I_c=-150\text{mA}$	100		300	
	$h_{FE(5)}^*$	$V_{CE}=-10\text{V}, I_c=-500\text{mA}$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}^*$	$I_c=-150\text{mA}, I_B=-15\text{mA}$			-0.4	V
	$V_{CE(sat)}^*$	$I_c=-500\text{mA}, I_B=-50\text{mA}$			-1.60	V
Base-emitter saturation voltage	$V_{BE(sat)}^*$	$I_c=-150\text{mA}, I_B=-15\text{mA}$			-1	V
	$V_{BE(sat)}^*$	$I_c=-500\text{mA}, I_B=-50\text{mA}$			-2.6	V
Transition frequency	f_T	$V_{CE}=-20\text{V}, I_c=-50\text{mA}, f=100\text{MHz}$	200			MHz
Delay time	t_d	$V_{CE}=-30\text{V}, I_c=-150\text{mA}, I_{B1}=-15\text{mA}$			10	ns
Rise time	t_r				40	ns
Storage time	t_s	$V_{CE}=-6\text{V}, I_c=-150\text{mA}, I_{B1}=-I_{B2}=-15\text{mA}$			80	ns
Fall time	t_f				30	ns

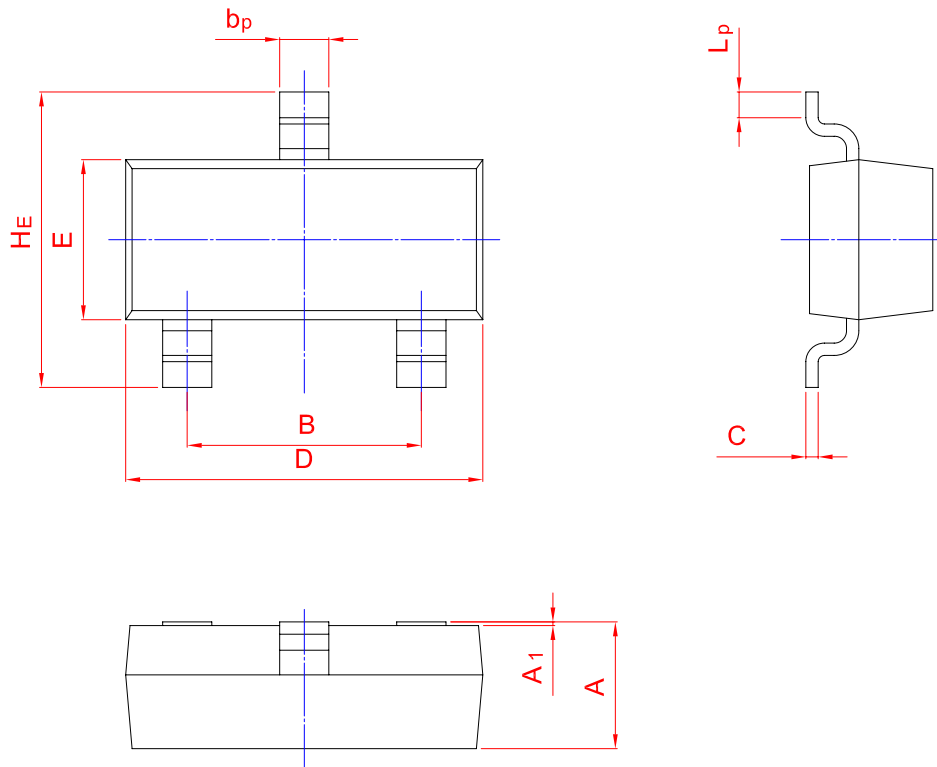
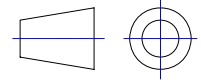
Typical Characteristics



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	b_p	C	D	E	H_E	A_1	L_p
mm	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50
	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20