MMBT2907A TRANSISTOR (PNP)

1.BASE
2.COLLECTOR
3.EMITTER

SOT-23-3

FEATURES

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

Marking: 2F

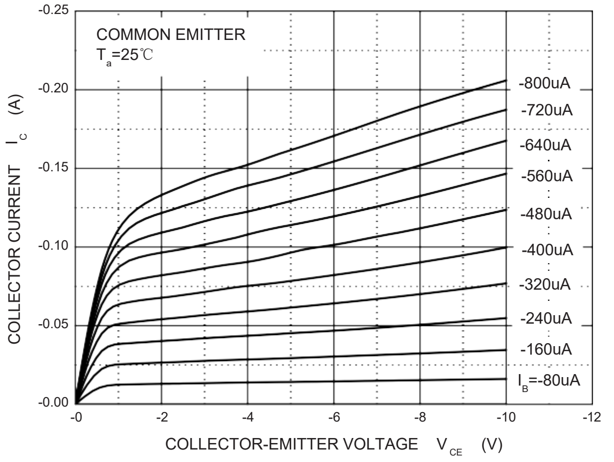
MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-60	V
V_{EBO}	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	℃/W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55 to +150	℃

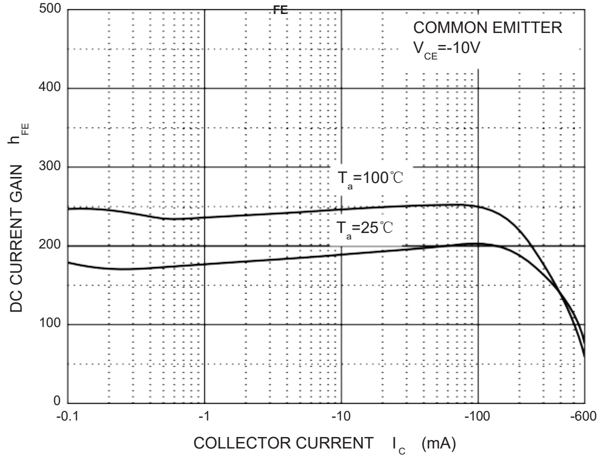
ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-10μA,I_E=0	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO*}$	I_C=-10mA,I_B=0	-60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-10μA,I_C=0	-5			V
Collector cut-off current	I_{CBO}	V_{CB}=-50V,I_E=0			-20	nA
Base cut-off current	I_{EBO}	V_{EB}=-3V, I_C =0			-10	nA
Collector cut-off current	I_{CEX}	V_{CE}=-30 V, $V_{BE(off)}$ =-0.5V			-50	nA
DC current gain	$h_{FE(1)}$	V_{CE}=-10V,I_C=-150mA	100		300	
	$h_{FE(2)}$	V_{CE}=-10V,I_C=-0.1mA	75			
	$h_{FE(3)}$	V_{CE}=-10V,I_C=-1mA	100			
	$h_{FE(4)}$	V_{CE}=-10V,I_C=-10mA	100			
	$h_{FE(5)}$	V_{CE}=-10V,I_C=-500mA	50			
Collector-emitter saturation voltage	$V_{CE(sat)*}$	I_C=-150mA,I_B=-15mA			-0.4	V
	$V_{CE(sat)*}$	I_C=-500mA,I_B=-50mA			-1.6	V
Base-emitter saturation voltage	$V_{BE(sat)*}$	I_C=-150mA,I_B=-15mA			-1.3	V
	$V_{BE(sat)*}$	I_C=-500mA,I_B=-50mA			-2.6	V
Transition frequency	f_T	V_{CE}=-20V,I_C=-50mA,f=100MHz	200			MHz
Delay time	t_d	V_{CE}=-30V,I_C=-150mA,$_{B1}$=-15mA			10	ns
Rise time	t_r				25	ns
Storage time	t_S	V_{CE}=-6V,I_C=-150mA, I_{B1}=- I_{B2}=- 15mA			225	ns
Fall time	t_f				60	ns

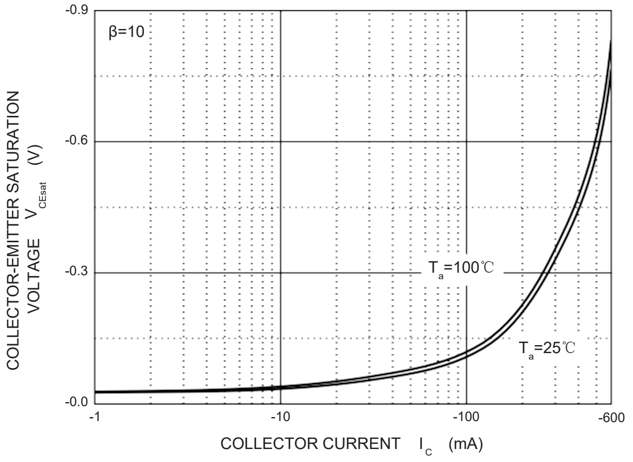
*Pulse test: t_p≤300μs, δ≤0.02.



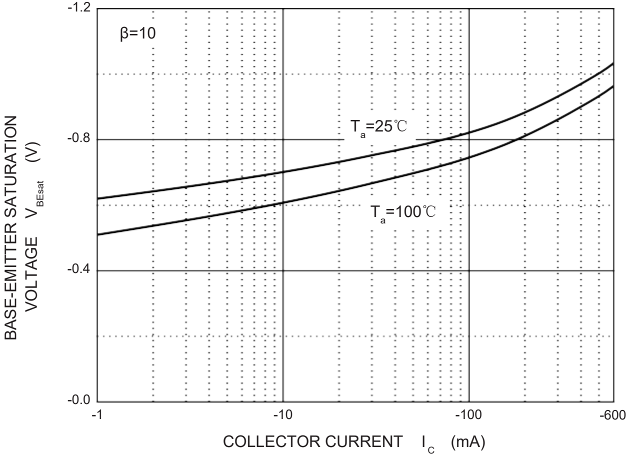
Static Characteristic



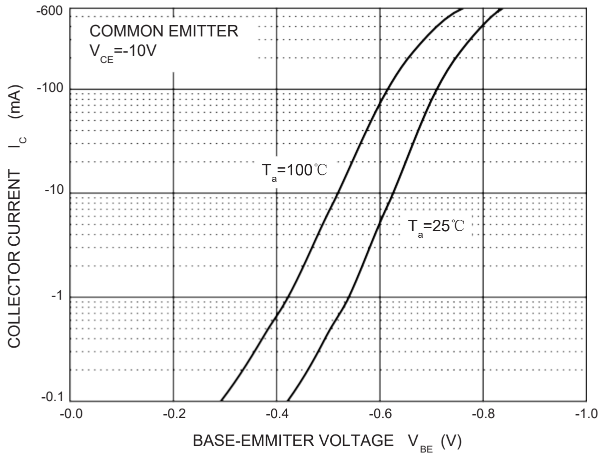
h_{FE} —— I_C



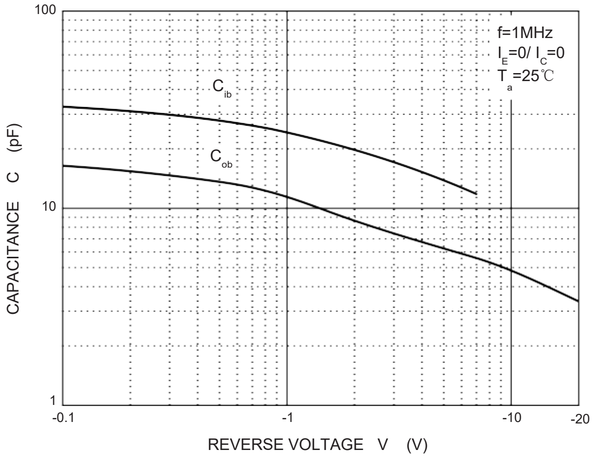
V_{CEsat} —— I_C



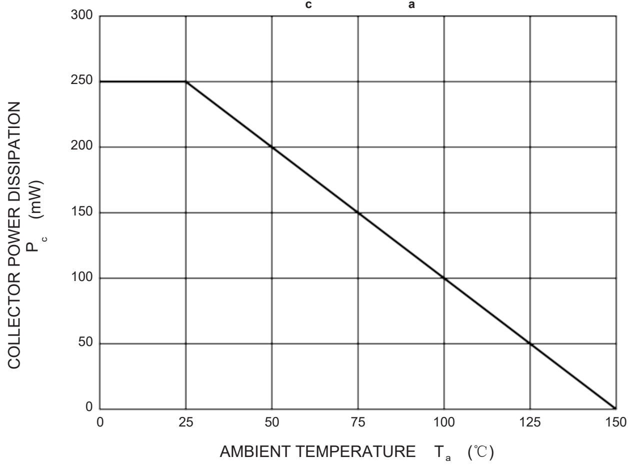
V_{BEsat} —— I_C



I_C —— V_{BE}



C_{ob}/ C_{ib} —— V_{CB}/ V_{EB}



P_c —— T_a