MMBT2907 (PNP)

FEATURES

Epitaxial planar die construction.

Ideal for medium power amplification and switching.

Marking:M2B

1. BASE
2. EMITTER
3. COLLECTO

SOT-23

MAXIMUM RATINGS (TA=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-60	V
Collector-Emitter Voltage	V_{CEO}	-40	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current -Continuous	I_C	-600	mA
Collector Power Dissipation	P_C	350	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	360	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	Tstg	-55 to +150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CBO}	I_C=-10μA I_E=0	-60			V
Collector-emitter breakdown voltage	V_{CEO}	I_C=-10mA I_B=0	-40			V
Emitter-base breakdown voltage	V_{EBO}	I_E=-10μA I_C=0	-5			μV
Collector cut-off current	I_{CBO}	V_{CB}=-50V I_E=0			-0.02	μA
Collector cut-off current	I_{CEX}	V_{CE}=-30V $V_{BE(OFF)}$=-0.5V			-0.05	μA
DC current gain	h_{FE}	V_{CE}=-10V I_C=-150mA V_{CE}=-10V I_C=-0.1Ma V_{CE}=-10V I_C=-1mA V_{CE}=-10V I_C=-10mA V_{CE}=-10V I_C=-500mA	100 35 50 75 30		300	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-150mA I_B=-15mA I_C=-500mA I_B=-50mA			-0.4 -1.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=-150mA I_B=-15mA I_C=-500mA I_B=-50mA			-1.3 -2.6	V
Output capacitance	C_{ob}	V_{CB}=10V,f=1.0MHz			8.0	pF
Input capacitance	C_{ib}	V_{EB}=10V,f=1.0MHz			30	pF
Transition frequency	f_T	V_{CE}=-20V I_C=-50mA f=100MHz	200			MHz

Turn-on time	t_{on}	V_{CE}=-30V,I_C=-150mA, I_{B1}=-15mA			45	ns
Delay time	t_d				10	ns
Rise time	tr				40	ns
Turn-off time	toff	VCE=-6V,IC=-150mA IB1=IB2=-15mA			100	ns
Storage time	ts				80	ns
Fall time	tf				30	ns

MMBT2907 Typical Characteristics

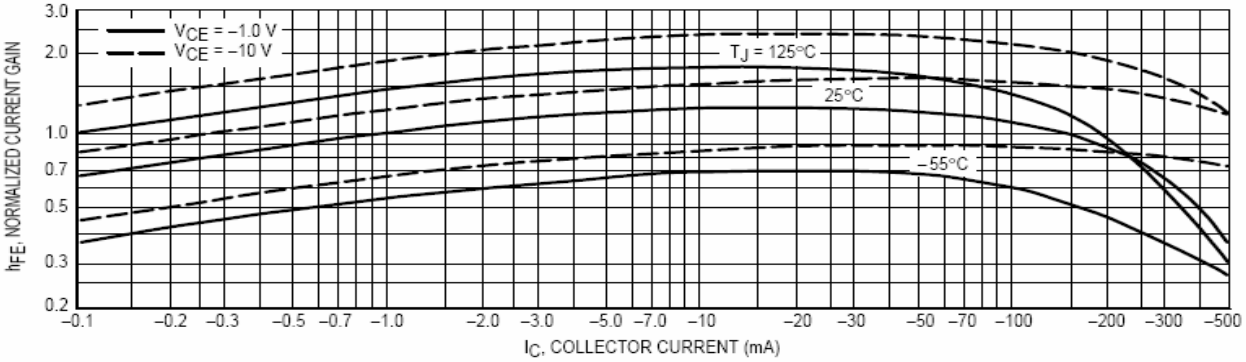

Figure 1. DC Current Gain

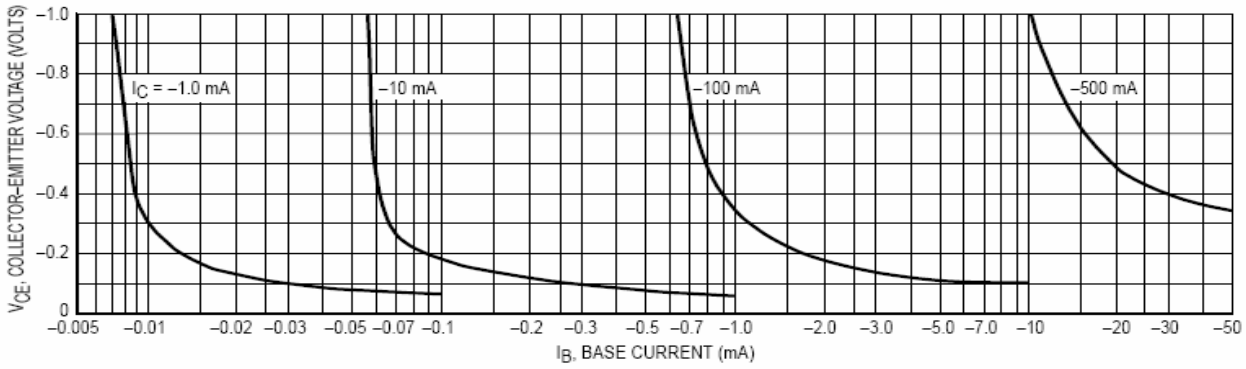

Figure 2. Collector Saturation Region

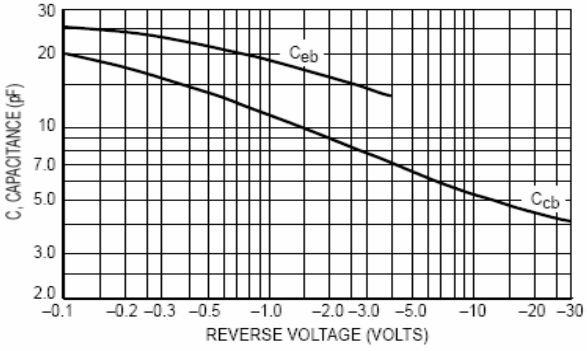

Figure 3. Capacitances

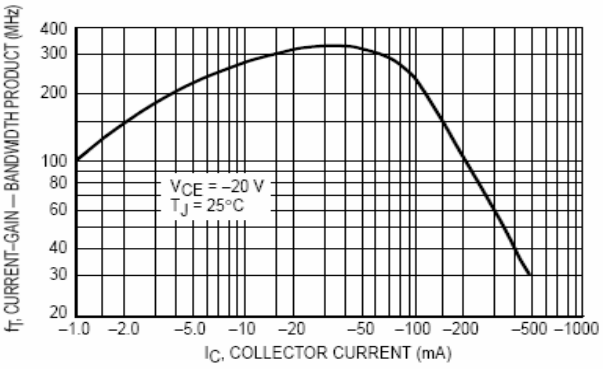

Figure 4. Current–Gain — Bandwidth Product