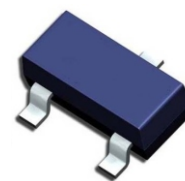
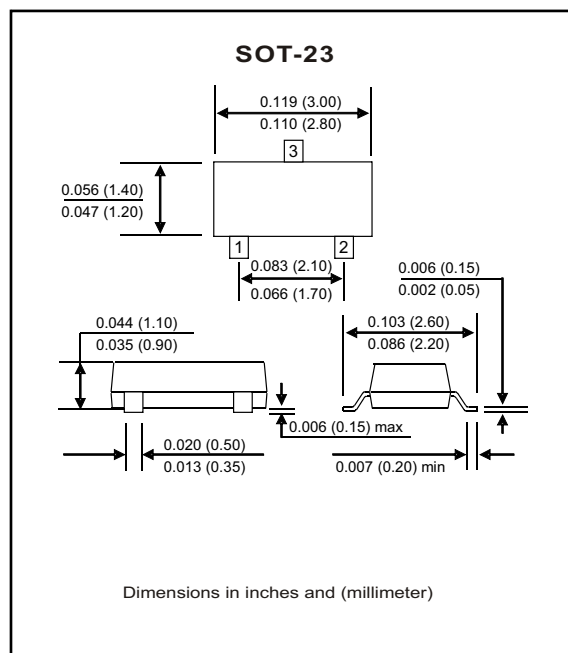
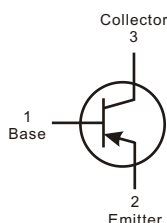


MMBT2907A-G (PNP) RoHS Device



Features

- Epitaxial planar die construction
- Device is designed as a general purpose amplifier and switching.
- Useful dynamic range exceeds to 600mA
As a switch and to 100MHz as an amplifier.



Maximum Ratings(at $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Min	Typ	Max	Unit
Collector-Base voltage	V_{CB0}			-60	V
Collector-Emitter voltage	V_{CE0}			-60	V
Emitter-Base voltage	V_{EB0}			-5	V
Collector current-Continuous	I_C			-0.6	A
Total device dissipation	P_D			0.35	W
Thermal resistance junction to ambient	$R_{\theta JA}$			357	$^{\circ}\text{C/W}$
Storage temperature and junction temperature	T_{STG} , T_J	-55		+150	$^{\circ}\text{C}$

Electrical Characteristics (at TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Max	Unit
Collector-Base breakdown voltage	$I_C = 10\mu A$, $I_E = 0$	V_{CBO}	-60		V
Collector-Emitter breakdown voltage	$I_C = 10mA$, $I_B = 0$	V_{CEO}^*	-60		V
Emitter-Base breakdown voltage	$I_E = 10\mu A$, $I_C = 0$	V_{EBO}	-5		V
Collector cut-off current	$V_{CB} = -50V$, $I_E = 0$	I_{CBO}		-20	nA
Base cut-off current	$V_{CE} = -30V$, $V_{EB} = -0.5V$	I_B		-50	nA
Collector cut-off current	$V_{CE} = -30V$, $V_{BE} = -0.5V$	I_{CEX}		-50	nA
DC current gain	$V_{CE} = -10V$, $I_C = -0.1mA$	$h_{FE(1)}^*$	75		
	$V_{CE} = -10V$, $I_C = -1mA$	$h_{FE(2)}^*$	100		
	$V_{CE} = -10V$, $I_C = -10mA$	$h_{FE(3)}^*$	100		
	$V_{CE} = -10V$, $I_C = -150mA$	$h_{FE(4)}^*$	100	300	
	$V_{CE} = -10V$, $I_C = -500mA$	$h_{FE(5)}^*$	50		
Collector-Emitter saturation voltage	$I_C = -150mA$, $I_B = -15mA$	$V_{CE(SAT)}^*$		-0.4	V
	$I_C = -500mA$, $I_B = -50mA$	$V_{CE(SAT)}^*$		-1.6	V
Base-Emitter saturation voltage	$I_C = -150mA$, $I_B = -15mA$	$V_{BE(SAT)}^*$		-1.3	V
	$I_C = -500mA$, $I_B = -50mA$	$V_{BE(SAT)}^*$		-2.6	V
Transition frequency	$V_{CE} = -20V$, $I_C = -50mA$ $F = 100MHz$	f_T	200		Mhz
Delay time	$V_{CE} = -30V$, $I_C = -150mA$	t_d		10	nS
Rise time	$I_{B1} = I_{B2} = -15mA$	t_r		40	nS
Storage time	$V_{CE} = -6V$, $I_C = -150mA$	t_s		80	nS
Fall time	$I_{B1} = I_{B2} = -15mA$	t_f		30	nS

* Pulse test: $t_p \leq 300\mu S$, $\delta \leq 0.02$

RATING AND CHARACTERISTIC CURVES (MMBT2907A-G)

Fig.1 Typical pulsed current gain
V.S. Collector current

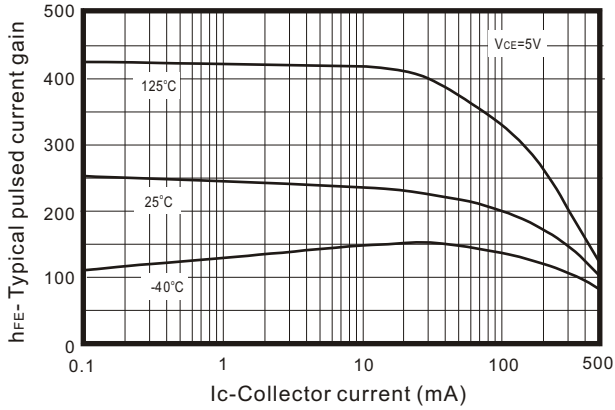


Fig.2 Collector-Emitter saturation
voltage V.S. Collector current

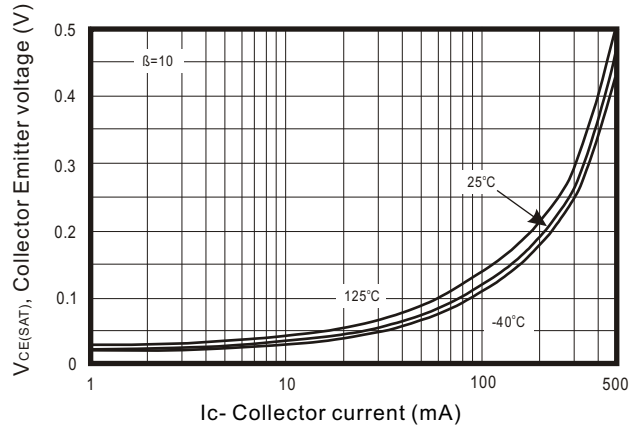


Fig. 3 Base-Emitter saturation
Voltage V.S. Collector current

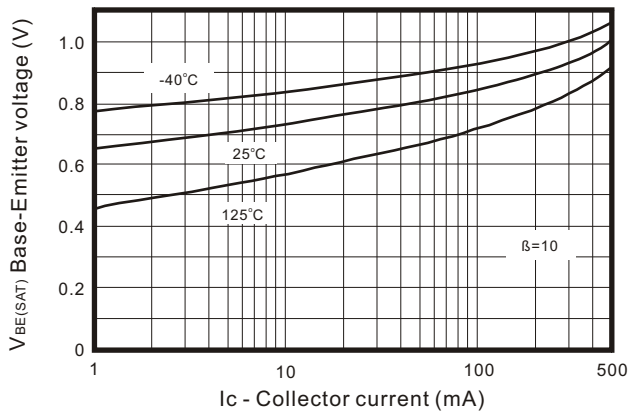


Fig.4 Base emitter ON voltage
V.S. Collector current

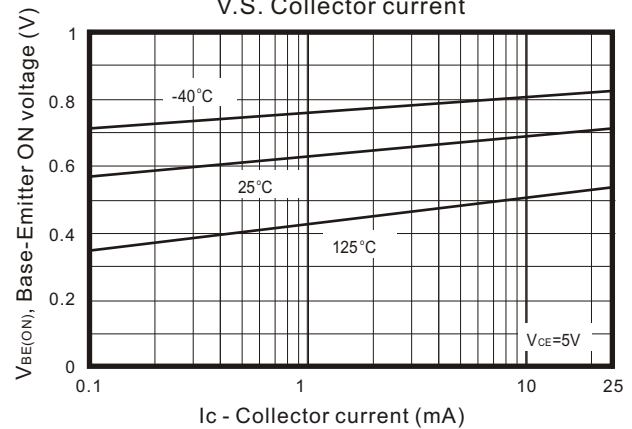


Fig. 5 Collector-Cutoff current
V.S. Ambient temperature

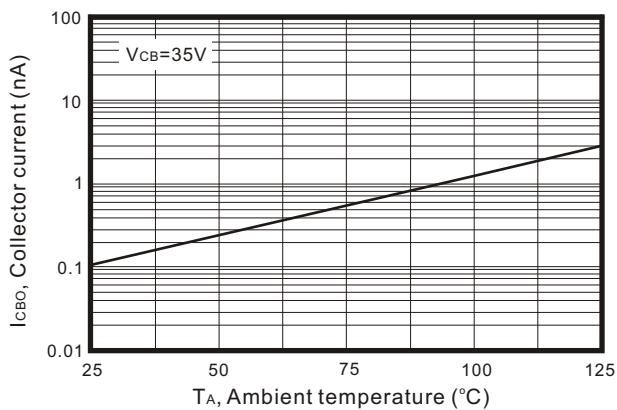
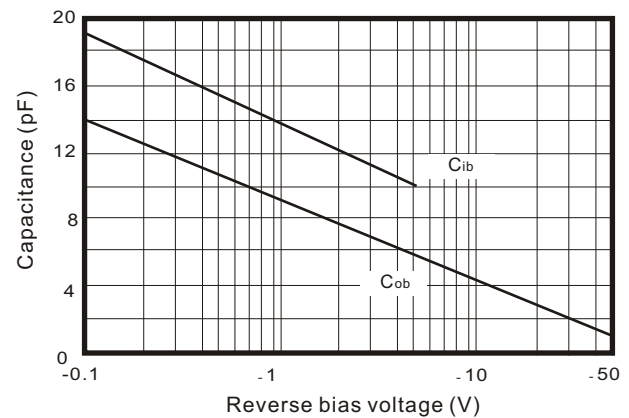


Fig.6 Input and output capacitance
V.S. reverse bias voltage



RATING AND CHARACTERISTIC CURVES (MMBT2907A-G)

Fig.7 Switching times
V.S collector current

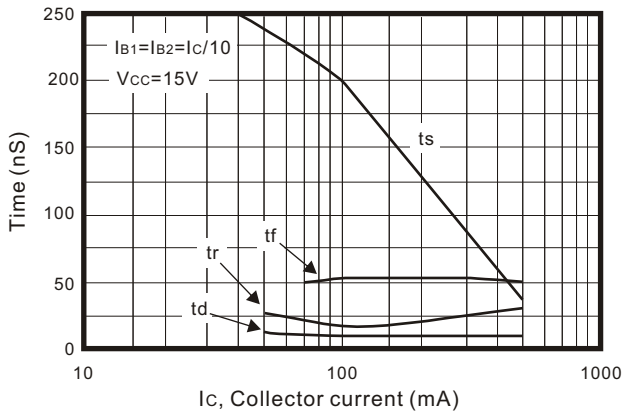


Fig.8 Turn on and turn off times
V.S collector current

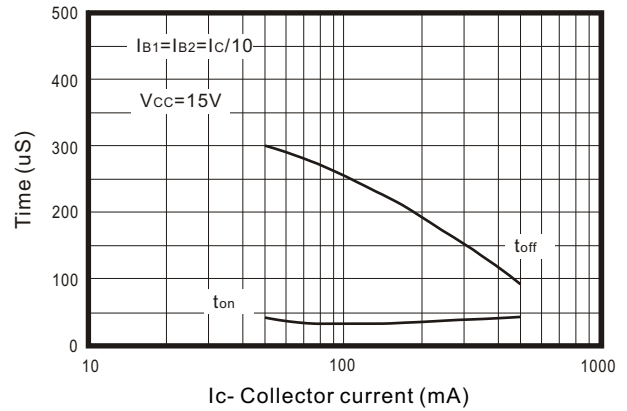


Fig. 9 Rise time V.S. Collector
and turn on base currents

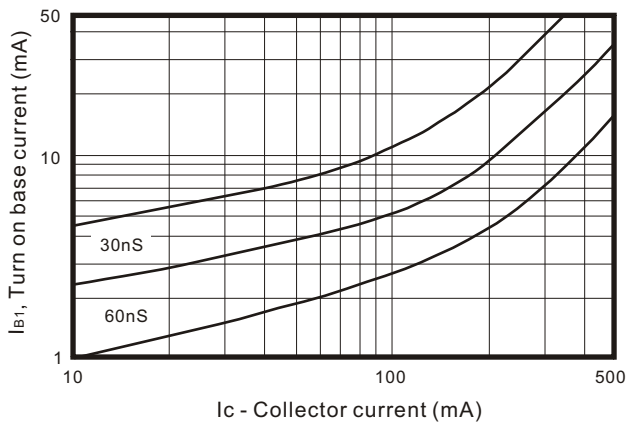


Fig.10 Common emitter characteristics

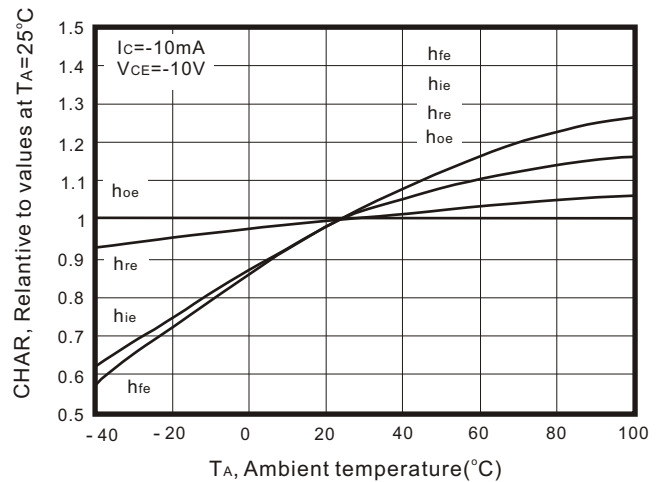


Fig . 11 Common emitter characteristics

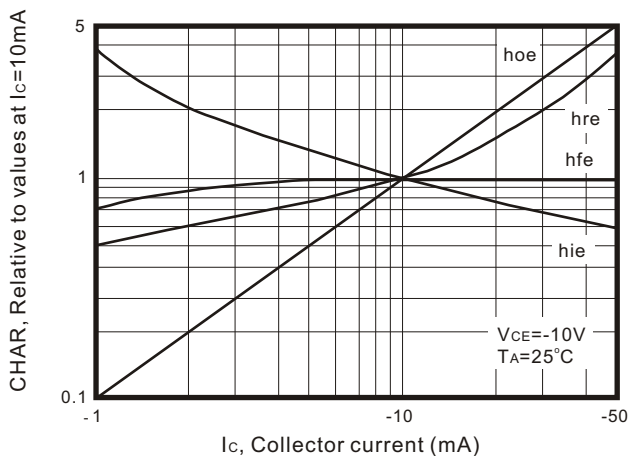


Fig. 12 Common emitter characteristics

