

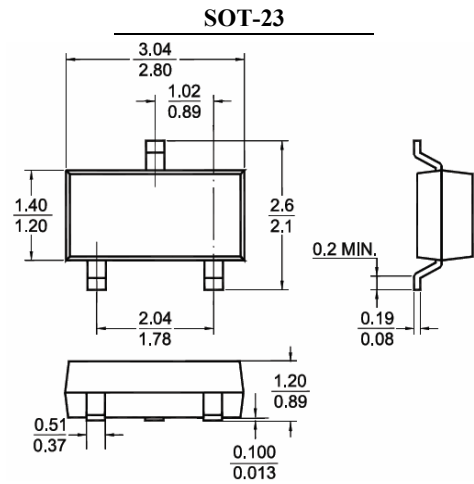
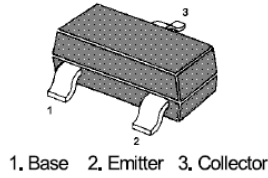


MMBT2907A

PNP TRANSISTOR

FEATURES

- The transistor is subdivided into one group according to its DC current gain.
- Suffix "H" indicates Halogen-free parts, ex. MMBT2907AH



Dimensions in millimeter

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	60	V
Collector Emitter Voltage	$-V_{CEO}$	60	V
Emitter Base Voltage	$-V_{EBO}$	5.0	V
Collector Current	$-I_C$	600	mA
Power Dissipation	P_{tot}	225	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

Electrical Characteristics ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise specified)

Parameter	Conditions	Symbol	Min.	Max.	Unit
DC Current Gain	$-I_C = 0.1\text{ mA}, -V_{CE} = 10\text{ V}$	h_{FE}	75	-	-
	$-I_C = 1\text{ mA}, -V_{CE} = 10\text{ V}$		100	-	
	$-I_C = 10\text{ mA}, -V_{CE} = 10\text{ V}$		100	-	
	$-I_C = 150\text{ mA}, -V_{CE} = 10\text{ V}$		100	300	
	$-I_C = 500\text{ mA}, -V_{CE} = 10\text{ V}$		50	-	
Collector Base Cutoff Current	$-V_{CB} = 50\text{ V}$	$-I_{CBO}$	-	10	nA
Collector Base Breakdown Voltage	$-I_C = 10\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	60	-	V
Collector Emitter Breakdown Voltage	$-I_C = 10\text{ mA}$	$-V_{(BR)CEO}$	60	-	V
Emitter Base Breakdown Voltage	$-I_E = 10\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	5.0	-	V
Collector Saturation Voltage	$-I_C = 150\text{ mA}, -I_B = 15\text{ mA}$	$-V_{CE(sat)}$	-	0.4	V
	$-I_C = 500\text{ mA}, -I_B = 50\text{ mA}$		-	1.6	
Base Saturation Voltage	$-I_C = 150\text{ mA}, -I_B = 15\text{ mA}$	$-V_{BE(sat)}$	-	1.3	V
	$-I_C = 500\text{ mA}, -I_B = 50\text{ mA}$		-	2.6	



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Parameter	Conditions	Symbol	Min.	Max.	Unit
Gain Bandwidth Product	$-I_C = 50\text{ mA}$, $-V_{CE} = 20\text{ V}$, $f = 100\text{ MHz}$	f_T	200	-	MHz
Collector Output Capacitance	$-V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	8.0	pF
Turn-on Time	$-V_{CC} = 30\text{ V}$, $-I_C = 150\text{ mA}$, $-I_{B1} = 15\text{ mA}$	t_{on}	-	45	nS
Delay Time	$-V_{CC} = 30\text{ V}$, $-I_C = 150\text{ mA}$, $-I_{B1} = 15\text{ mA}$	t_d	-	10	nS
Rise Time	$-V_{CC} = 30\text{ V}$, $-I_C = 150\text{ mA}$, $-I_{B1} = 15\text{ mA}$	t_r	-	40	nS
Turn-off Time	$-V_{CC} = 6\text{ V}$, $-I_C = 150\text{ mA}$, $-I_{B1} = -I_{B2} = 15\text{ mA}$	t_{off}	-	100	nS
Storage Time	$-V_{CC} = 6\text{ V}$, $-I_C = 150\text{ mA}$, $-I_{B1} = -I_{B2} = 15\text{ mA}$	t_s	-	80	nS
Fall Time	$-V_{CC} = 6\text{ V}$, $-I_C = 150\text{ mA}$, $-I_{B1} = -I_{B2} = 15\text{ mA}$	t_f	-	30	nS

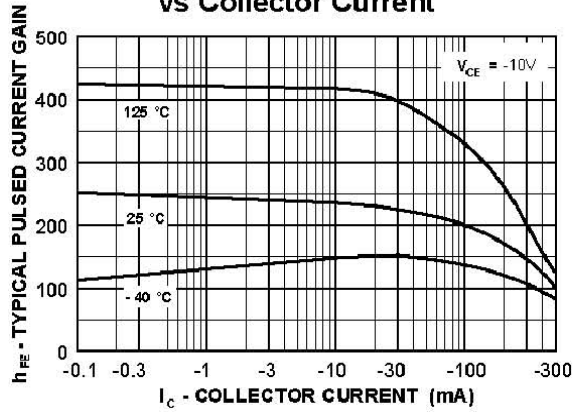


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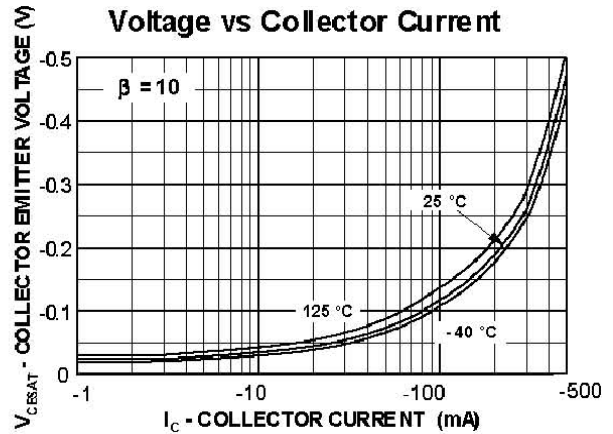
PNP TRANSISTOR

RATINGS AND CHARACTERISTIC CURVES

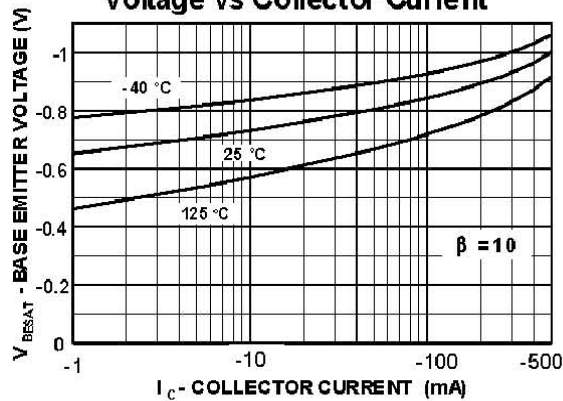
Typical Pulsed Current Gain vs Collector Current



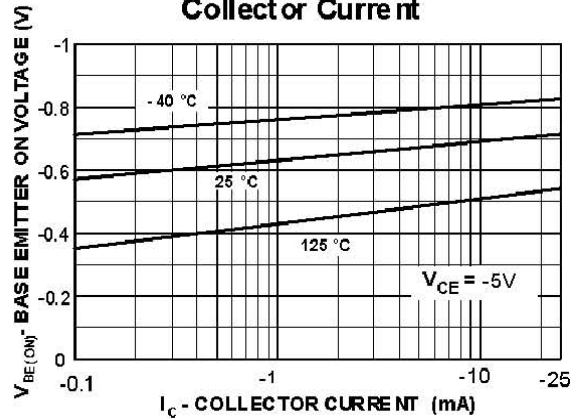
Collector-Emitter Saturation Voltage vs Collector Current



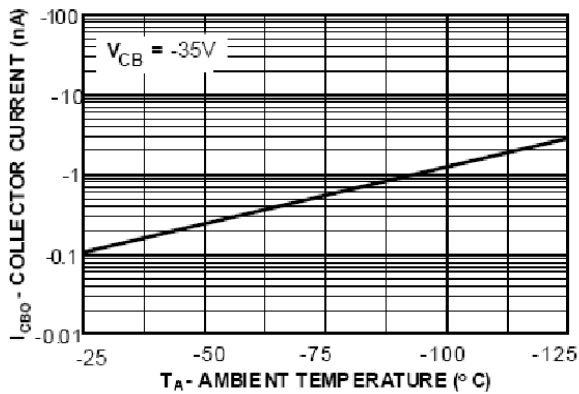
Base-Emitter Saturation Voltage vs Collector Current



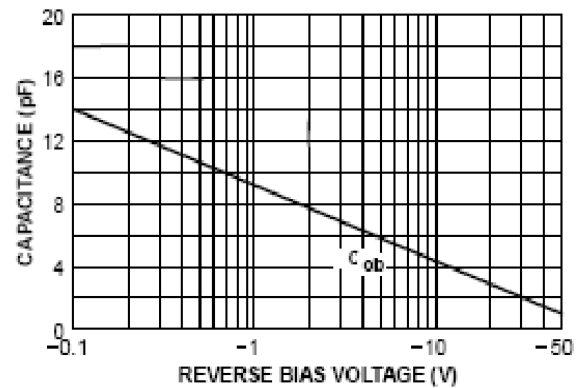
Base Emitter ON Voltage vs Collector Current



Collector-Cutoff Current vs Ambient Temperature



Input and Output Capacitance vs Reverse Bias Voltage



$P_c T_a$

