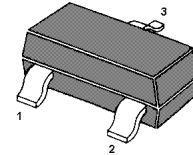


PNP Silicon Epitaxial Planar Transistor

for switching and AF amplifier applications.

The transistor is subdivided into one group according to its DC current gain.



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

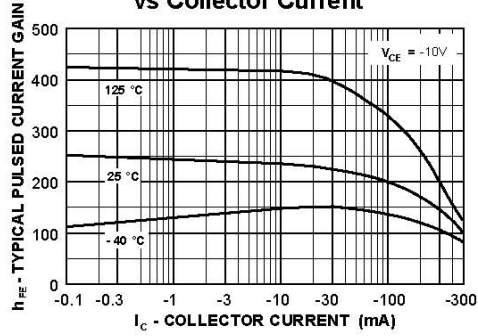
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	60	V
Collector Emitter Voltage	$-V_{CEO}$	40	V
		60	
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	600	mA
Power Dissipation	P_{tot}	350	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

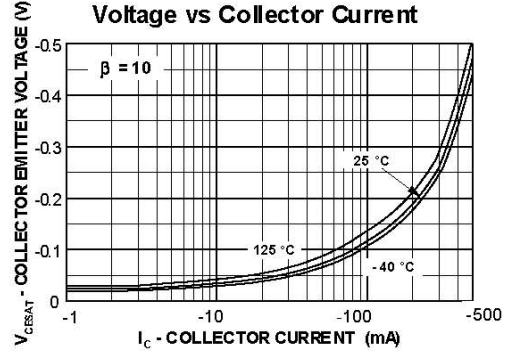
Characteristics at $T_a = 25^\circ\text{C}$

Parameter		Symbol	Min.	Max.	Unit
DC Current Gain					
at $-I_C = 0.1\text{ mA}$, $-V_{CE} = 10\text{ V}$	MMBT2907	h_{FE}	35	-	-
	MMBT2907A	h_{FE}	75	-	-
at $-I_C = 1\text{ mA}$, $-V_{CE} = 10\text{ V}$	MMBT2907	h_{FE}	50	-	-
	MMBT2907A	h_{FE}	100	-	-
at $-I_C = 10\text{ mA}$, $-V_{CE} = 10\text{ V}$	MMBT2907	h_{FE}	75	-	-
	MMBT2907A	h_{FE}	100	-	-
at $-I_C = 150\text{ mA}$, $-V_{CE} = 10\text{ V}$		h_{FE}	100	300	-
at $-I_C = 500\text{ mA}$, $-V_{CE} = 10\text{ V}$	MMBT2907	h_{FE}	30	-	-
	MMBT2907A	h_{FE}	50	-	-
Collector Base Cutoff Current					
at $-V_{CB} = 50\text{ V}$	MMBT2907	$-I_{CBO}$	-	20	nA
	MMBT2907A	$-I_{CBO}$	-	10	nA
Collector Base Breakdown Voltage					
at $-I_C = 10\text{ }\mu\text{A}$		$-V_{(BR)CBO}$	60	-	V
Collector Emitter Breakdown Voltage					
at $-I_C = 10\text{ mA}$	MMBT2907	$-V_{(BR)CEO}$	40	-	V
	MMBT2907A	$-V_{(BR)CEO}$	60	-	V
Emitter Base Breakdown Voltage					
at $-I_E = 10\text{ }\mu\text{A}$		$-V_{(BR)EBO}$	5	-	V
Collector Saturation Voltage					
at $-I_C = 150\text{ mA}$, $-I_B = 15\text{ mA}$		$-V_{CE(sat)}$	-	0.4	V
at $-I_C = 500\text{ mA}$, $-I_B = 50\text{ mA}$		$-V_{CE(sat)}$	-	1.6	V
Base Saturation Voltage					
at $-I_C = 150\text{ mA}$, $-I_B = 15\text{ mA}$		$-V_{BE(sat)}$	-	1.3	V
at $-I_C = 500\text{ mA}$, $-I_B = 50\text{ mA}$		$-V_{BE(sat)}$	-	2.6	V
Gain Bandwidth Product					
at $-I_C = 50\text{ mA}$, $-V_{CE} = 20\text{ V}$, $f = 100\text{ MHz}$		f_T	200	-	MHz
Collector Output Capacitance					
at $-V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$		C_{ob}	-	8	pF
Turn-on Time					
at $-V_{CC} = 30\text{ V}$, $-I_C = 150\text{ mA}$, $-I_{B1} = 15\text{ mA}$		t_{on}	-	45	ns
Delay Time					
at $-V_{CC} = 30\text{ V}$, $-I_C = 150\text{ mA}$, $-I_{B1} = 15\text{ mA}$		t_d	-	10	ns
Rise Time					
at $-V_{CC} = 30\text{ V}$, $-I_C = 150\text{ mA}$, $-I_{B1} = 15\text{ mA}$		t_r	-	40	ns
Turn-off Time					
at $-V_{CC} = 6\text{ V}$, $-I_C = 150\text{ mA}$, $-I_{B1} = -I_{B2} = 15\text{ mA}$		t_{off}	-	100	ns
Storage Time					
at $-V_{CC} = 6\text{ V}$, $-I_C = 150\text{ mA}$, $-I_{B1} = -I_{B2} = 15\text{ mA}$		t_s	-	80	ns
Fall Time					
at $-V_{CC} = 6\text{ V}$, $-I_C = 150\text{ mA}$, $-I_{B1} = -I_{B2} = 15\text{ mA}$		t_f	-	30	ns

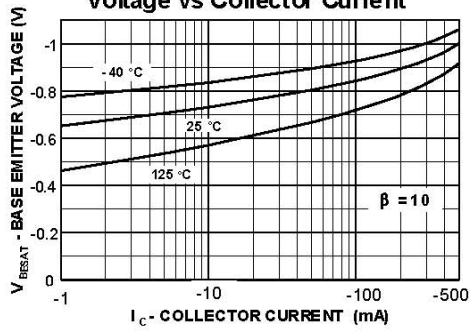
**Typical Pulsed Current Gain
vs Collector Current**



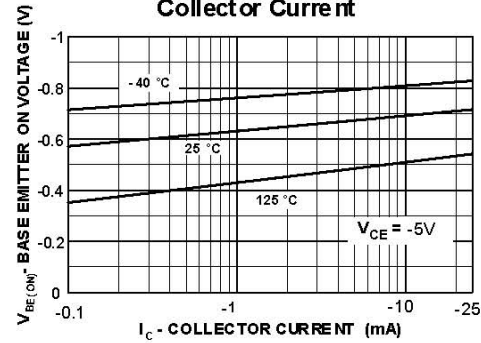
**Collector-Emitter Saturation
Voltage vs Collector Current**



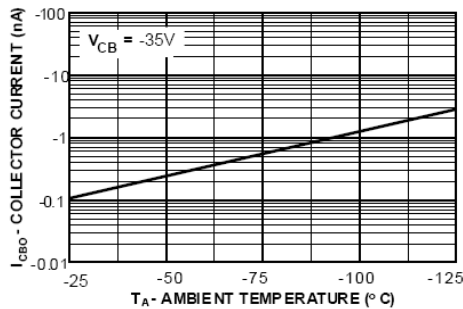
**Base-Emitter Saturation
Voltage vs Collector Current**



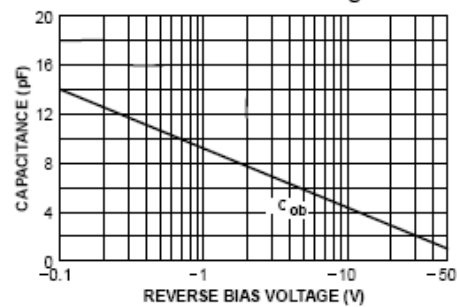
**Base Emitter ON Voltage vs
Collector Current**



**Collector-Cutoff Current
vs Ambient Temperature**



**Input and Output Capacitance
vs Reverse Bias Voltage**



$P_C T_a$

