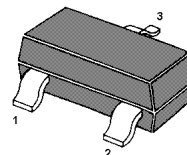


MMBT2907 / MMBT2907A

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

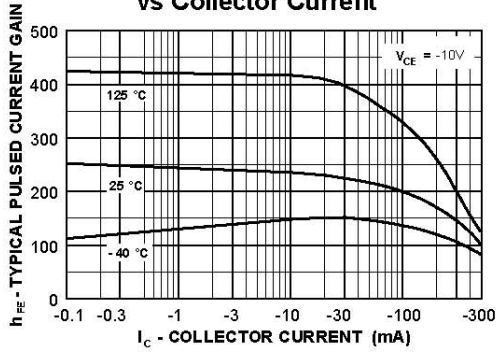
MMBT2907 / MMBT2907A

Characteristics at T_a = 25 °C

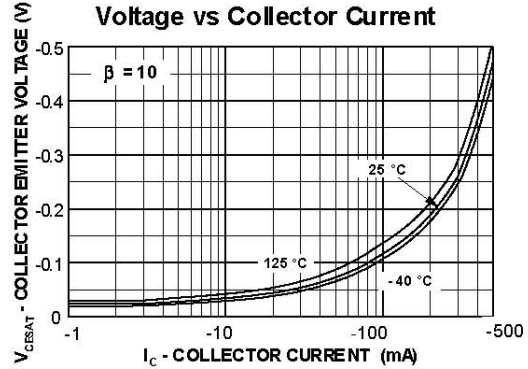
Parameter		Symbol	Min.	Max.	Unit
DC Current Gain at -I _C = 0.1 mA, -V _{CE} = 10 V at -I _C = 1 mA, -V _{CE} = 10 V at -I _C = 10 mA, -V _{CE} = 10 V at -I _C = 150 mA, -V _{CE} = 10 V at -I _C = 500 mA, -V _{CE} = 10 V	MMBT2907	h _{FE}	35	-	-
	MMBT2907A	h _{FE}	75	-	-
	MMBT2907	h _{FE}	50	-	-
	MMBT2907A	h _{FE}	100	-	-
	MMBT2907	h _{FE}	75	-	-
	MMBT2907A	h _{FE}	100	-	-
Collector Base Cutoff Current at -V _{CB} = 50 V	MMBT2907	-I _{CBO}	-	20	nA
	MMBT2907A	-I _{CBO}	-	10	nA
Collector Base Breakdown Voltage at -I _C = 10 μA		-V _{(BR)CBO}	60	-	V
Collector Emitter Breakdown Voltage at -I _C = 10 mA	MMBT2907	-V _{(BR)CEO}	40	-	V
	MMBT2907A	-V _{(BR)CEO}	60	-	V
Emitter Base Breakdown Voltage at -I _E = 10 μA		-V _{(BR)EBO}	5	-	V
Collector Saturation Voltage at -I _C = 150 mA, -I _B = 15 mA at -I _C = 500 mA, -I _B = 50 mA		-V _{CE(sat)}	-	0.4	V
		-V _{CE(sat)}	-	1.6	V
Base Saturation Voltage at -I _C = 150 mA, -I _B = 15 mA at -I _C = 500 mA, -I _B = 50 mA		-V _{BE(sat)}	-	1.3	V
		-V _{BE(sat)}	-	2.6	V
Gain Bandwidth Product at -I _C = 50 mA, -V _{CE} = 20 V, f = 100 MHz		f _T	200	-	MHz
Collector Output Capacitance at -V _{CB} = 10 V, f = 1 MHz		C _{ob}	-	8	pF
Turn-on Time at -V _{CC} = 30 V, -I _C = 150 mA, -I _{B1} = 15 mA		t _{on}	-	45	ns
Delay Time at -V _{CC} = 30 V, -I _C = 150 mA, -I _{B1} = 15 mA		t _d	-	10	ns
Rise Time at -V _{CC} = 30 V, -I _C = 150 mA, -I _{B1} = 15 mA		t _r	-	40	ns
Turn-off Time at -V _{CC} = 6 V, -I _C = 150 mA, -I _{B1} = -I _{B2} = 15 mA		t _{off}	-	100	ns
Storage Time at -V _{CC} = 6 V, -I _C = 150 mA, -I _{B1} = -I _{B2} = 15 mA		t _s	-	80	ns
Fall Time at -V _{CC} = 6 V, -I _C = 150 mA, -I _{B1} = -I _{B2} = 15 mA		t _f	-	30	ns

MMBT2907 / MMBT2907A

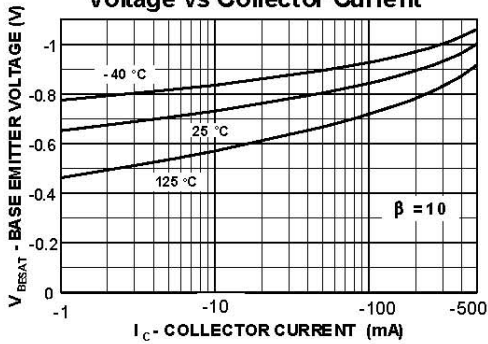
Typical Pulsed Current Gain vs Collector Current



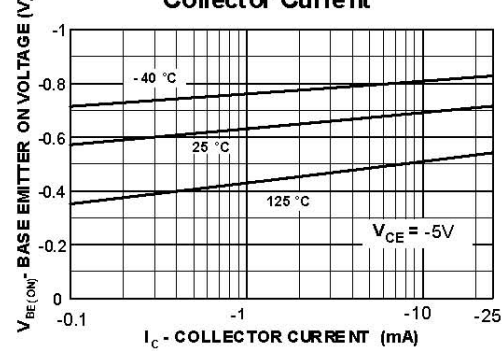
Collector-Emitter Saturation Voltage vs Collector Current



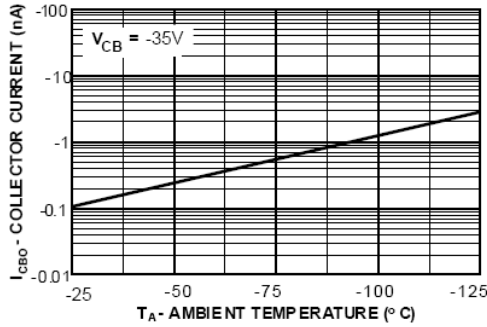
Base-Emitter Saturation Voltage vs Collector Current



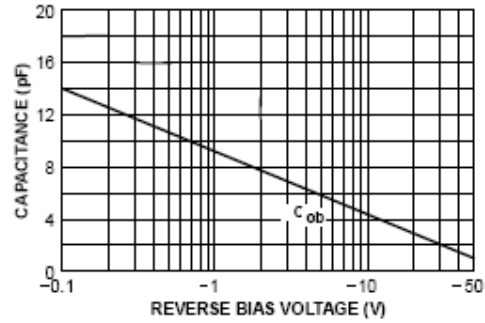
Base Emitter ON Voltage vs Collector Current



Collector-Cutoff Current vs Ambient Temperature



Input and Output Capacitance vs Reverse Bias Voltage



Pc-Ta

