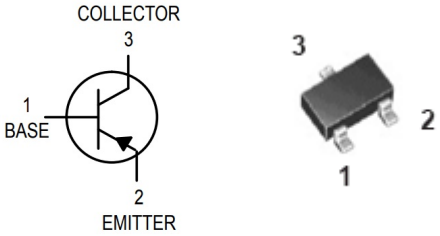
MMBT5087

PNP Silicon Epitaxial Planar Transistors

for switching and AF amplifier applications



Marking: 2Q

SOT-23

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	50	V
Collector Emitter Voltage	$-V_{CEO}$	45	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	50	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

Characteristics at T_a = 25 °C

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $-V_{CE}$ = 5 V, $-I_C$ = 1 mA Current Gain Group	h_{FE}	150	400	- - -
Collector Base Cutoff Current at $-V_{CB}$ = 50 V	$-I_{CBO}$	-	50	nA
Emitter Base Cutoff Current at $-V_{EB}$ = 5 V	$-I_{EBO}$	-	50	nA
Collector Base Breakdown Voltage at $-I_C$ = 100 µA	$-V_{(BR)CBO}$	50	-	V
Collector Emitter Breakdown Voltage at $-I_C$ = 1 mA	$-V_{(BR)CEO}$	45	-	V
Emitter Base Breakdown Voltage at $-I_E$ = 100 µA	$-V_{(BR)EBO}$	5	-	V
Collector Emitter Saturation Voltage at $-I_C$ = 100 mA, $-I_B$ = 5 mA	$-V_{CE(sat)}$	-	0.65	V
Base Emitter Saturation Voltage at $-I_C$ = 100 mA, $-I_B$ = 5 mA	$-V_{BE(sat)}$	-	1	V
Gain Bandwidth Product at $-V_{CE}$ = 5 V, $-I_C$ = 10 mA	f_T	100	-	MHz
Output Capacitance at $-V_{CB}$ = 10 V, f = 1 MHz	C_{OB}	-	7	pF
Noise Figure at $-V_{CE}$ = 5 V, $-I_C$ = 200 µA, f = 1 KHz, R_G = 2 KΩ	NF	-	10	dB

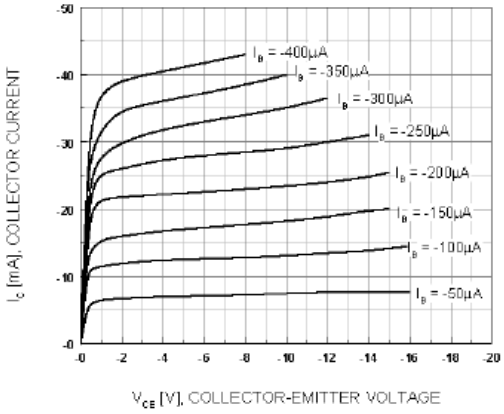


Figure 1. Static Characteristic

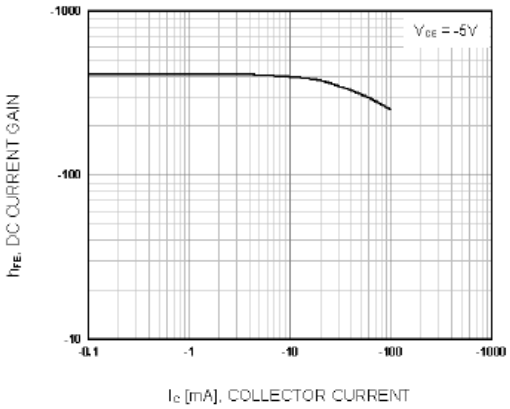


Figure 2. DC current Gain

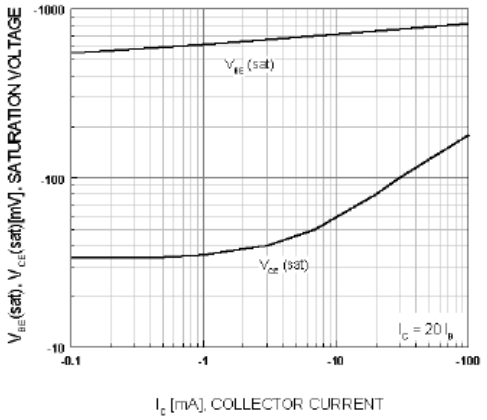


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

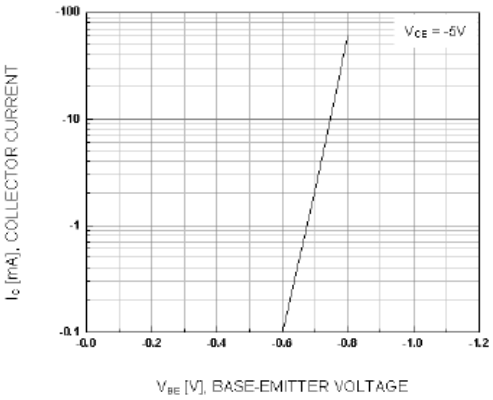


Figure 4. Base-Emitter On Voltage

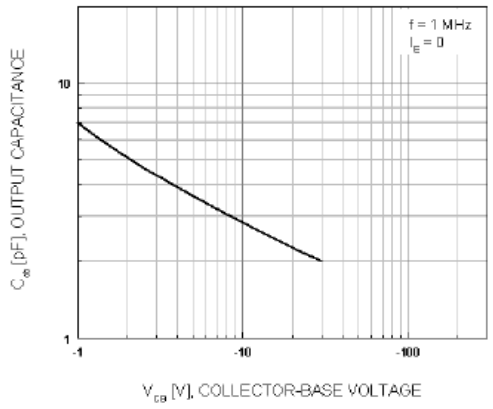


Figure 5. Collector Output Capacitance

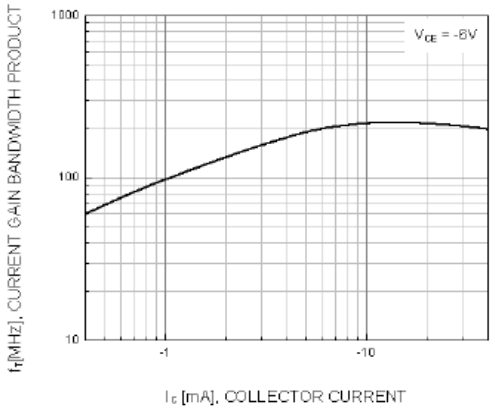


Figure 6. Current Gian Bandwidth Product