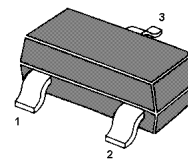


MMBT5401

PNP Silicon Epitaxial Planar Transistor

for high voltage amplifier applications



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	$-V_{CBO}$	160	V
Collector Emitter Voltage	$-V_{CEO}$	150	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current Continuous	$-I_C$	600	mA
Power Dissipation	P_{tot}	200	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 $-V_{CE} = 5\text{ V}$, $-I_C = 1\text{ mA}$	h_{FE}	50	-	-
at $-V_{CE} = 5\text{ V}$, $-I_C = 10\text{ mA}$	h_{FE}	60	240	-
at $-V_{CE} = 5\text{ V}$, $-I_C = 50\text{ mA}$	h_{FE}	50	-	-
Collector Cutoff Current				
at $-V_{CB} = 120\text{ V}$	$-I_{CBO}$	-	50	nA
Emitter Cutoff Current				
at $-V_{EB} = 3\text{ V}$	$-I_{EBO}$	-	50	nA
Collector Base Breakdown Voltage				
at $-I_C = 100\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	160	-	V
Collector Emitter Breakdown Voltage				
at $-I_C = 1\text{ mA}$	$-V_{(BR)CEO}$	150	-	V
Emitter Base Breakdown Voltage				
at $-I_E = 10\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	5	-	V
Collector Emitter Saturation Voltage				
at $-I_C = 10\text{ mA}$, $-I_B = 1\text{ mA}$	$-V_{CE(sat)}$	-	0.2	V
at $-I_C = 50\text{ mA}$, $-I_B = 5\text{ mA}$	$-V_{CE(sat)}$	-	0.5	V
Base Emitter Saturation Voltage				
at $-I_C = 10\text{ mA}$, $-I_B = 1\text{ mA}$	$-V_{BE(sat)}$	-	1	V
at $-I_C = 50\text{ mA}$, $-I_B = 5\text{ mA}$	$-V_{BE(sat)}$	-	1	V
Gain Bandwidth Product				
at $-V_{CE} = 10\text{ V}$, $-I_C = 10\text{ mA}$, $f = 100\text{ MHz}$	f_T	100	300	MHz
Output Capacitance				
at $-V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{obo}	-	6	pF

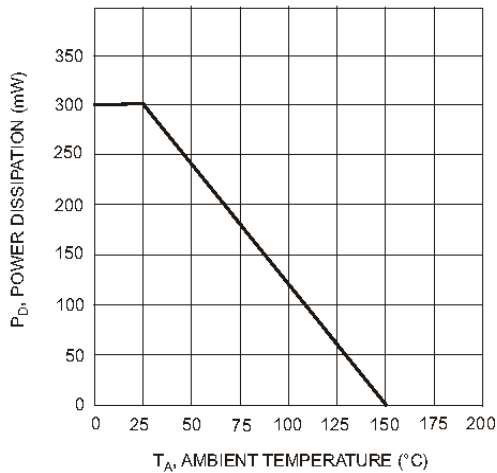


Fig. 1, Max Power Dissipation vs Ambient Temperature

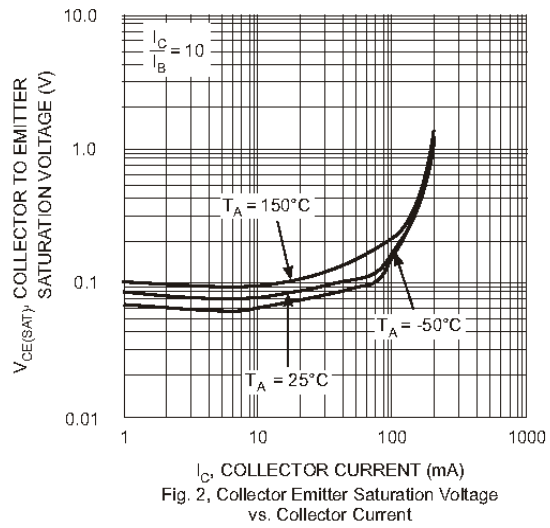


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

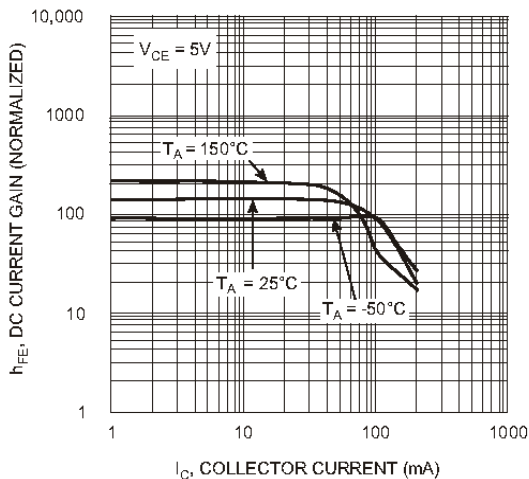


Fig. 3, DC Current Gain vs. Collector Current

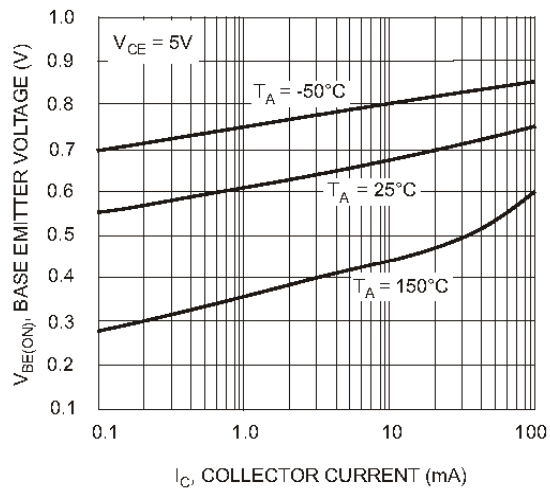


Fig. 4, Base Emitter Voltage vs. Collector Current

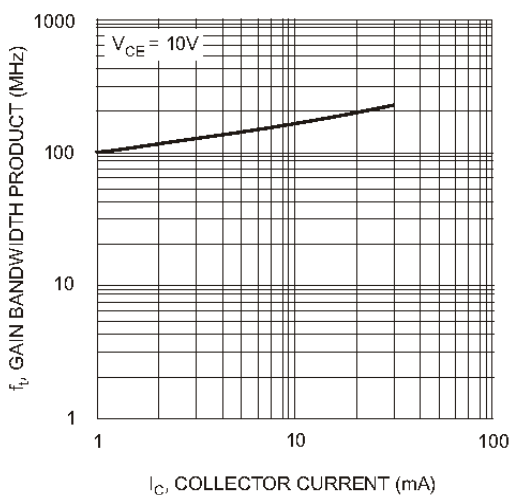


Fig. 5, Gain Bandwidth Product vs Collector Current