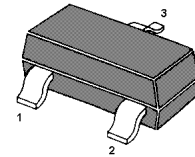


MMBT5401

PNP Silicon Epitaxial Planar Transistor

for high voltage amplifier applications



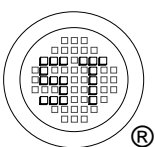
1. Base 2. Emitter 3. Collector
SOT-23 Plastic Package

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

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}	350	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

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

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 Base Cutoff Current at $-V_{CB} = 120\text{ V}$	$-I_{CBO}$	-	50	nA
Emitter Base 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



SEMTECH ELECTRONICS LTD.
Subsidiary of Sino-Tech International (BVI) Limited



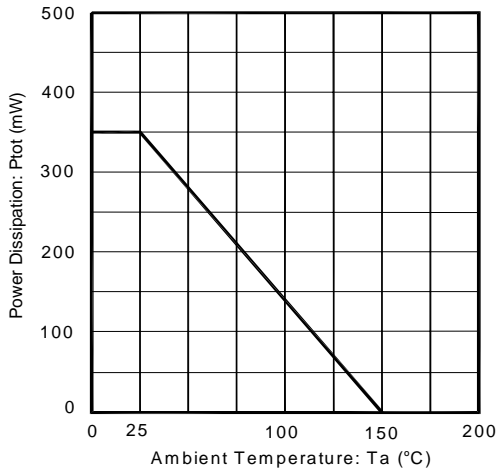


Fig. 1 Power Derating Curve

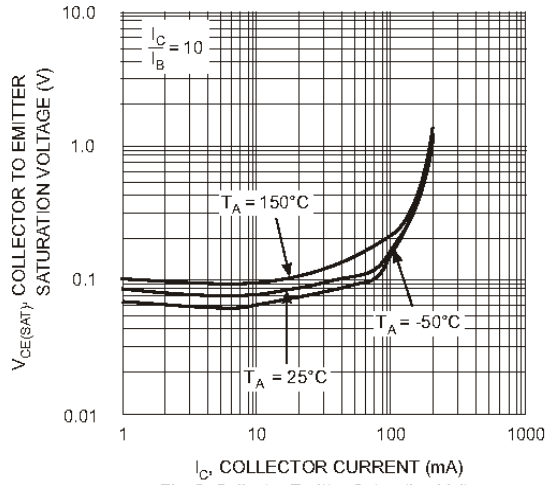


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

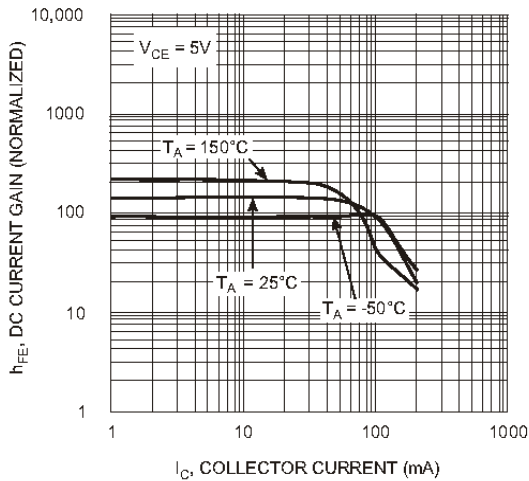


Fig. 3, DC Current Gain vs. Collector Current

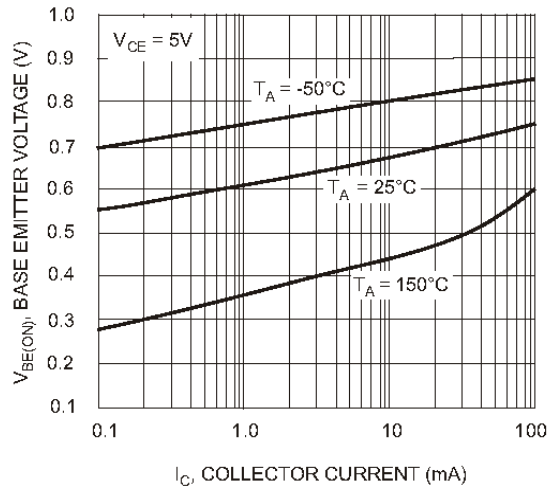


Fig. 4, Base Emitter Voltage vs. Collector Current

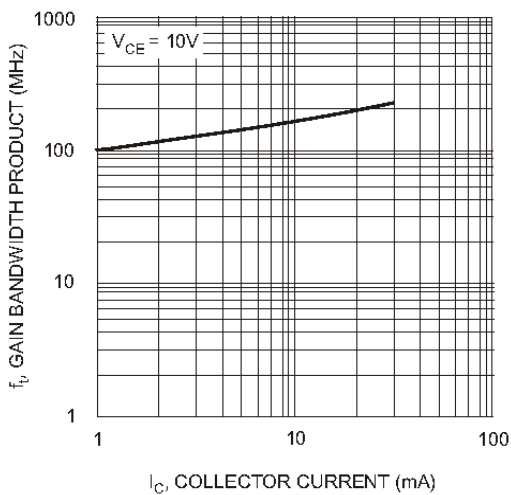
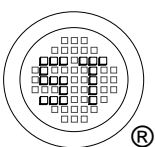


Fig. 5, Gain Bandwidth Product vs. Collector Current



SEMTECH ELECTRONICS LTD.
 Subsidiary of Sino-Tech International (BVI) Limited

