

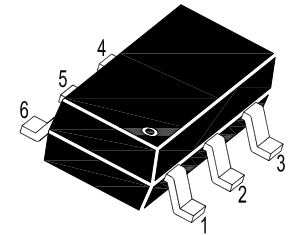
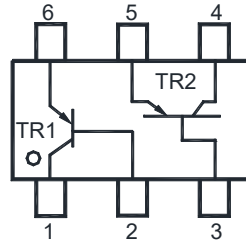
MMBT5401BD

PNP Silicon Epitaxial Planar Transistor

for high voltage switching and amplifier applications.

Features

- Fully Internally Isolated in a Small Surface Mount Package
- Halogen and Antimony Free(HAF), RoHS compliant



1. Collector 1 2. Base 1 3. Base 2
4. Collector 2 5. Emitter 2 6. Emitter 1
SOT-26 Plastic Package

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

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	$-I_C$	200	mA
Power Dissipation ^{1) 2)}	P_D	300	mW
Operating Junction and Storage Temperature Range	T_j, T_{stg}	- 55 to + 150	$^\circ\text{C}$

Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance from Junction to Ambient ¹⁾	$R_{\theta JA}$	417	$^\circ\text{C/W}$

¹⁾ For a device mounted on minimum recommended pad layout with 1oz copper that is on a single-sided 1.6mm FR-4 PCB;
The device is measured under still air conditions whilst operating in a steady-state.

²⁾ Maximum combined dissipation.

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

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain				
at $-V_{CE} = 5\text{ V}$, $-I_C = 1\text{ mA}$	h_{FE}	50	240	-
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	240	-
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 $-I_C = 10\text{ mA}$, $-I_B = 1\text{ mA}$ at $-I_C = 50\text{ mA}$, $-I_B = 5\text{ mA}$	$-V_{CE(sat)}$	- -	0.2 0.5	V
Base Emitter Saturation Voltage at $-I_C = 10\text{ mA}$, $-I_B = 1\text{ mA}$ at $-I_C = 50\text{ mA}$, $-I_B = 5\text{ mA}$	$-V_{BE(sat)}$	- -	1 1	V
Current 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

Electrical Characteristics Curves

Fig. 1 Typical DC Current Gain vs Collector Current

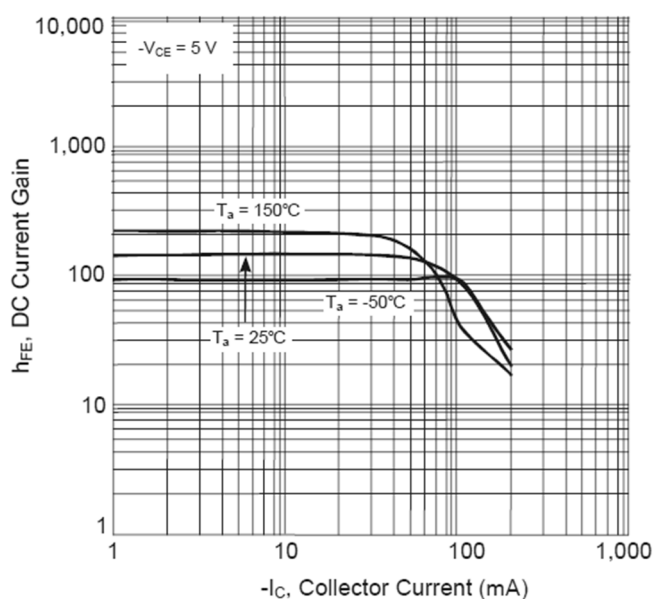


Fig. 2 Typical Collector-Emitter Saturation Voltage vs Collector Current

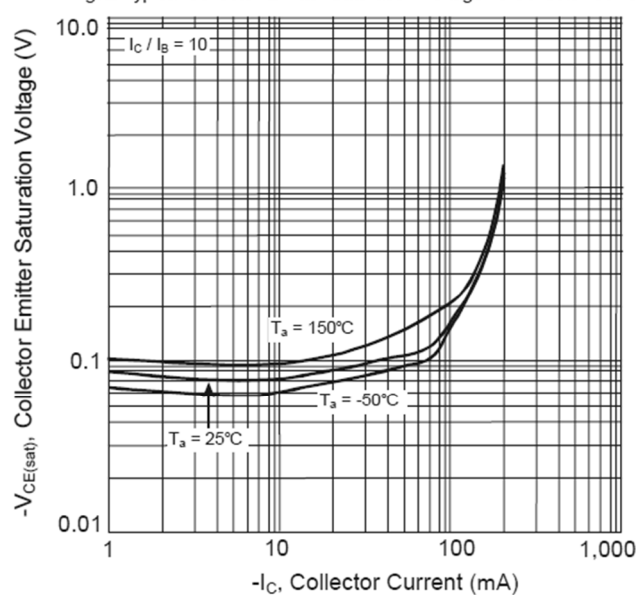


Fig. 3 Typical Gain-Bandwidth Product vs Collector Current

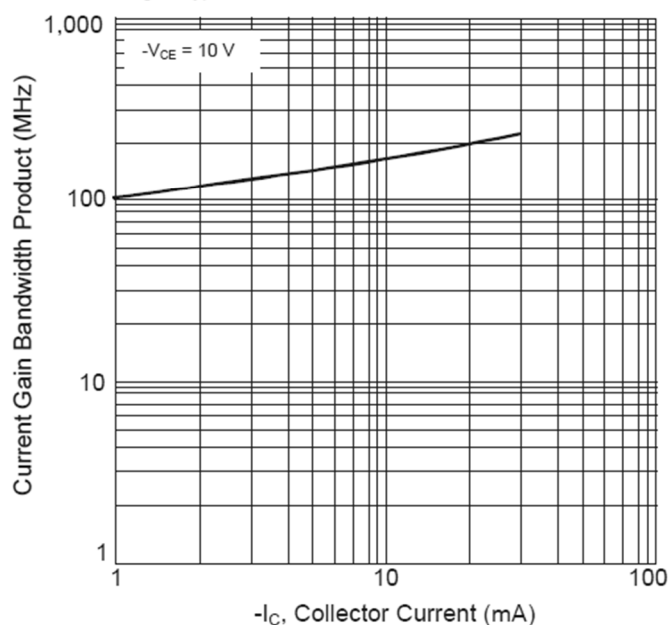
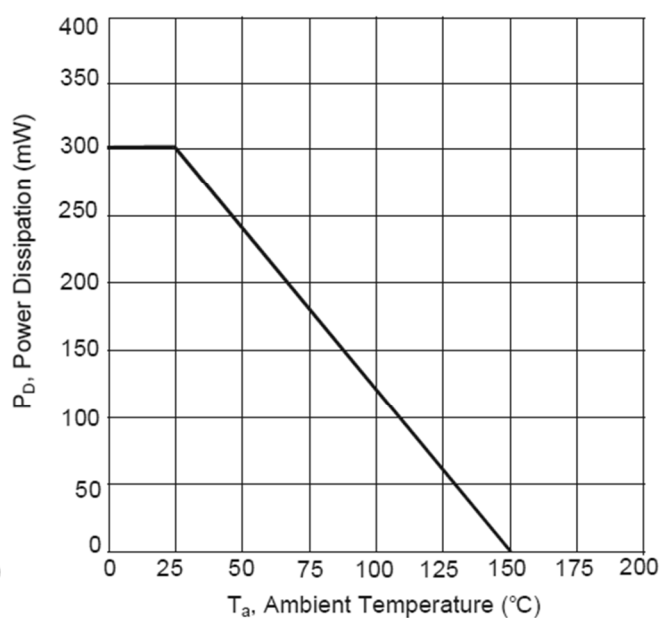
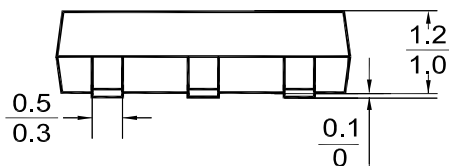
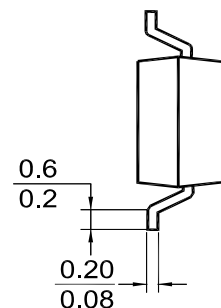
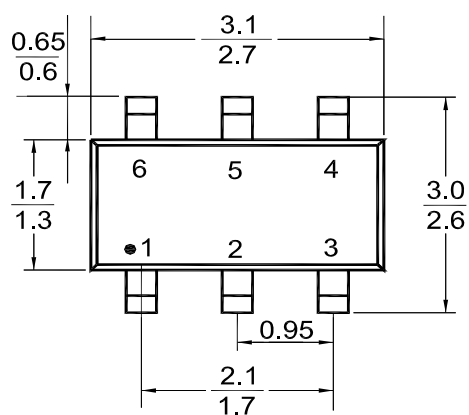


Fig. 4 Power Dissipation vs. Ambient Temperature



Package Outline Dimensions (Units: mm)

SOT-26



Marking information

"SE" = Part No.

"M" =Month Code Marking

