

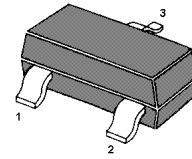
MMBT5401-AH

PNP Silicon Epitaxial Planar Transistor

for high voltage amplifier applications

Features

- AEC-Q101 is Available
- Halogen and Antimony Free(HAF), RoHS compliant



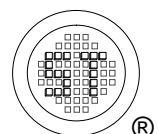
1. Base 2. Emitter 3. Collector
TO-236 Plastic Package

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{\text{CBO}}$	160	V
Collector Emitter Voltage	$-V_{\text{CEO}}$	150	V
Emitter Base Voltage	$-V_{\text{EBO}}$	5	V
Collector Current Continuous	$-I_{\text{C}}$	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 $-V_{\text{CE}} = 5 \text{ V}$, $-I_{\text{C}} = 1 \text{ mA}$ at $-V_{\text{CE}} = 5 \text{ V}$, $-I_{\text{C}} = 10 \text{ mA}$ at $-V_{\text{CE}} = 5 \text{ V}$, $-I_{\text{C}} = 50 \text{ mA}$	h_{FE} h_{FE} h_{FE}	50 60 50	- 240 -	- - -
Collector Base Cutoff Current at $-V_{\text{CB}} = 120 \text{ V}$	$-I_{\text{CBO}}$	-	50	nA
Emitter Base Cutoff Current at $-V_{\text{EB}} = 3 \text{ V}$	$-I_{\text{EBO}}$	-	50	nA
Collector Base Breakdown Voltage at $-I_{\text{C}} = 100 \mu\text{A}$	$-V_{(\text{BR})\text{CBO}}$	160	-	V
Collector Emitter Breakdown Voltage at $-I_{\text{C}} = 1 \text{ mA}$	$-V_{(\text{BR})\text{CEO}}$	150	-	V
Emitter Base Breakdown Voltage at $-I_{\text{E}} = 10 \mu\text{A}$	$-V_{(\text{BR})\text{EBO}}$	5	-	V
Collector Emitter Saturation Voltage at $-I_{\text{C}} = 10 \text{ mA}$, $-I_{\text{B}} = 1 \text{ mA}$ at $-I_{\text{C}} = 50 \text{ mA}$, $-I_{\text{B}} = 5 \text{ mA}$	$-V_{\text{CE}(\text{sat})}$	- -	0.2 0.5	V
Base Emitter Saturation Voltage at $-I_{\text{C}} = 10 \text{ mA}$, $-I_{\text{B}} = 1 \text{ mA}$ at $-I_{\text{C}} = 50 \text{ mA}$, $-I_{\text{B}} = 5 \text{ mA}$	$-V_{\text{BE}(\text{sat})}$	- -	1 1	V
Gain Bandwidth Product at $-V_{\text{CE}} = 10 \text{ V}$, $-I_{\text{C}} = 10 \text{ mA}$, $f = 100 \text{ MHz}$	f_{T}	100	300	MHz
Output Capacitance at $-V_{\text{CB}} = 10 \text{ V}$, $f = 1 \text{ MHz}$	C_{obo}	-	6	pF



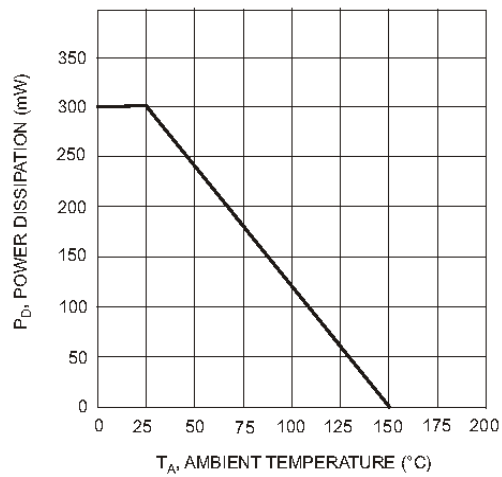


Fig. 1, Max Power Dissipation vs Ambient Temperature

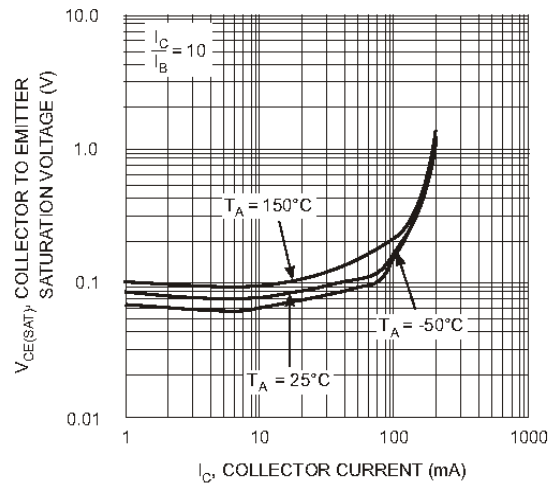


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

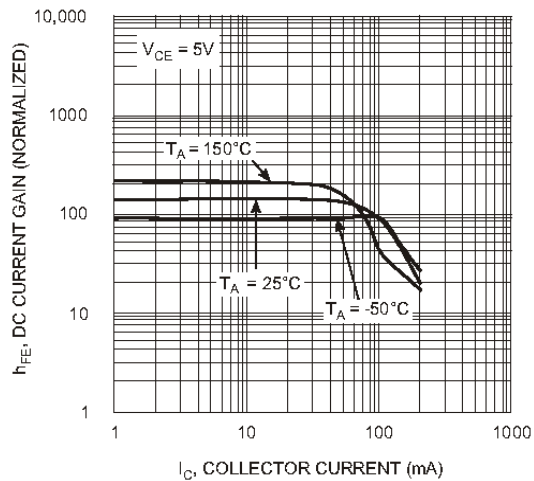


Fig. 3, DC Current Gain vs. Collector Current

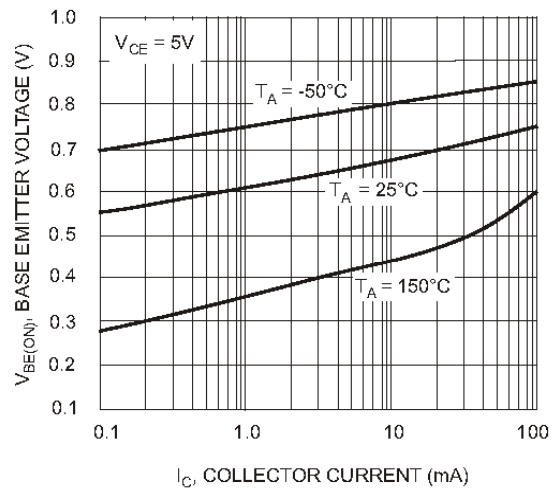


Fig. 4, Base Emitter Voltage vs. Collector Current

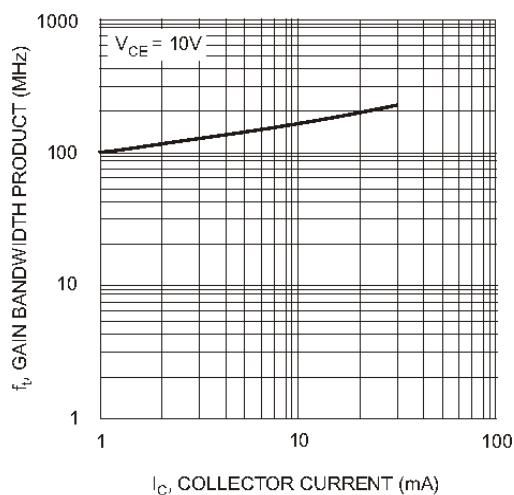
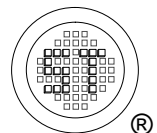


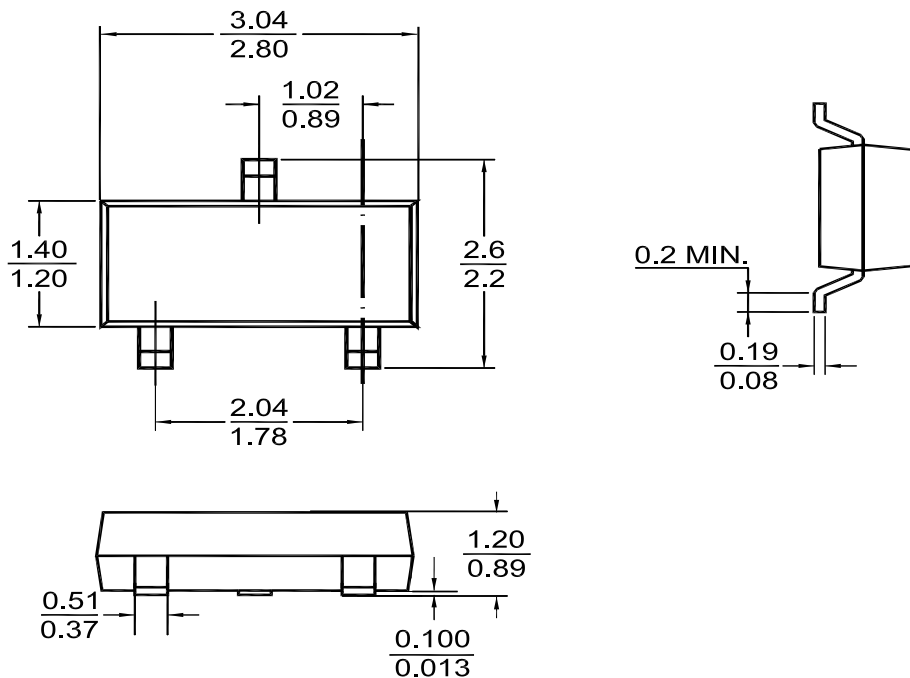
Fig. 5, Gain Bandwidth Product vs Collector Current



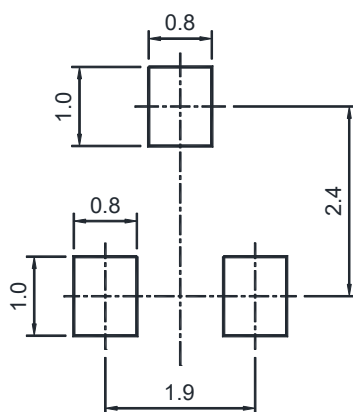
PACKAGE OUTLINE

Plastic surface mounted package (Dimensions in mm)

TO-236



Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
TO-236	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

