



MMBT5401

PNP Plastic Encapsulate Transistor

Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: 2L

Maximum Ratings

Symbol	Rating	Rating	Unit
V_{CEO}	Collector-Emitter Voltage	-150	V
V_{CBO}	Collector-Base Voltage	-160	V
V_{EBO}	Emitter-Base Voltage	-5.0	V
I_C	Collector Current	-0.6	A
P_D	Power Dissipation	0.3	W
T_J	Operating Junction Temperature	-55 to +150	°C
T_{STG}	Storage Temperature	-55 to +150	°C

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
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OFF CHARACTERISTICS

$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ($I_C = -1.0\text{mA}$, $I_E = 0$)	-150	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C = -100\mu\text{A}$, $I_E = 0$)	-160	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ($I_E = -10\mu\text{A}$, $I_C = 0$)	-5.0	---	Vdc
I_{CBO}	Collector Cutoff Current ($V_{CB} = -120\text{Vdc}$, $I_E = 0$)	---	-0.1	μA
I_{EBO}	Emitter Cutoff Current ($V_{EB} = -4.0\text{Vdc}$, $I_C = 0$)	---	-0.1	μA

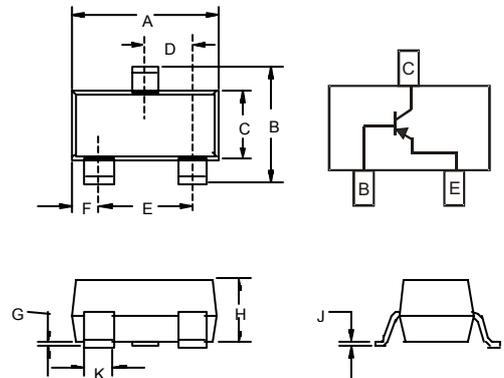
ON CHARACTERISTICS

h_{FE-1}	DC Current Gain ($V_{CE} = -5.0\text{Vdc}$, $I_C = -1.0\text{mA}$)	80	---	---
h_{FE-2}	DC Current Gain ($V_{CE} = -5.0\text{Vdc}$, $I_C = -10\text{mA}$)	100	300	---
h_{FE-3}	DC Current Gain ($V_{CE} = -5.0\text{Vdc}$, $I_C = -50\text{mA}$)	50	---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C = -50\text{mA}$, $I_E = -5.0\text{mA}$)	---	-0.5	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ($I_C = -50\text{mA}$, $I_E = -5.0\text{mA}$)	---	-1.0	Vdc

SMALL-SIGNAL CHARACTERISTICS

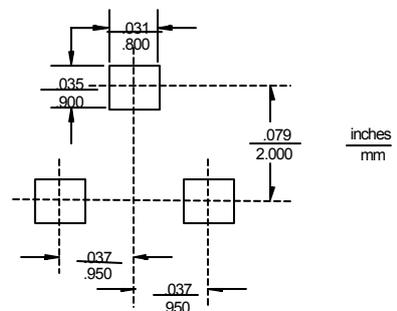
f_T	Current Gain-Bandwidth Product ($I_C = -10\text{mA}$, $V_{CE} = -5.0\text{Vdc}$, $f = 30\text{MHz}$)	100	---	MHz
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SOT-23



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout



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Fig. 1 - Static Characteristics

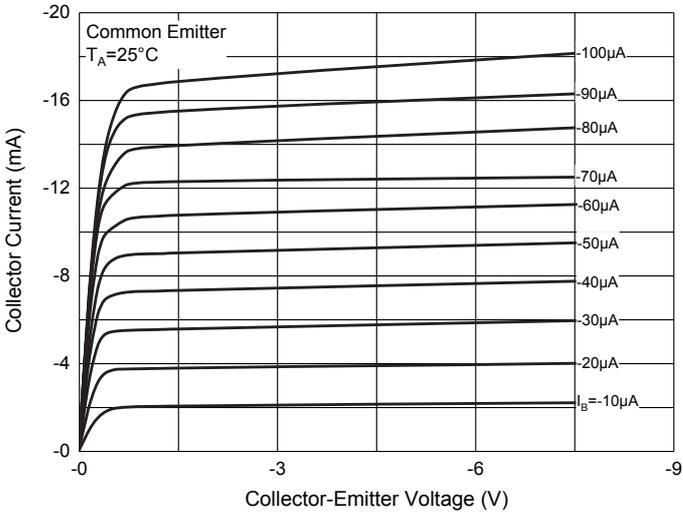


Fig. 2 - DC Current Gain Characteristics

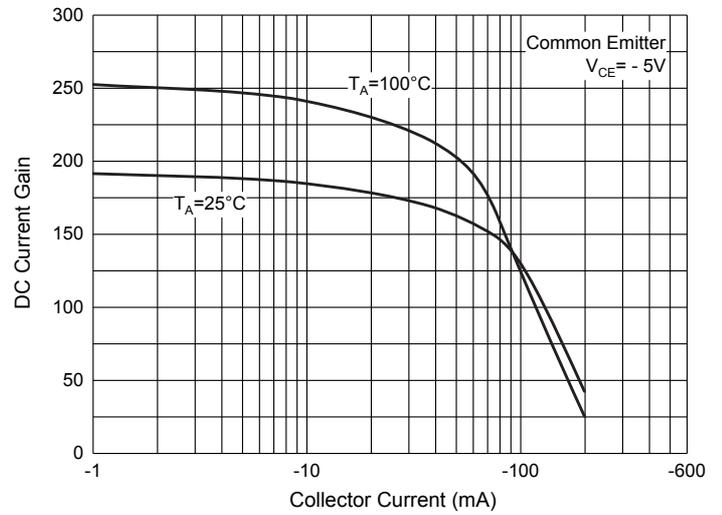


Fig. 3 - Base-Emitter Saturation Voltage Characteristics

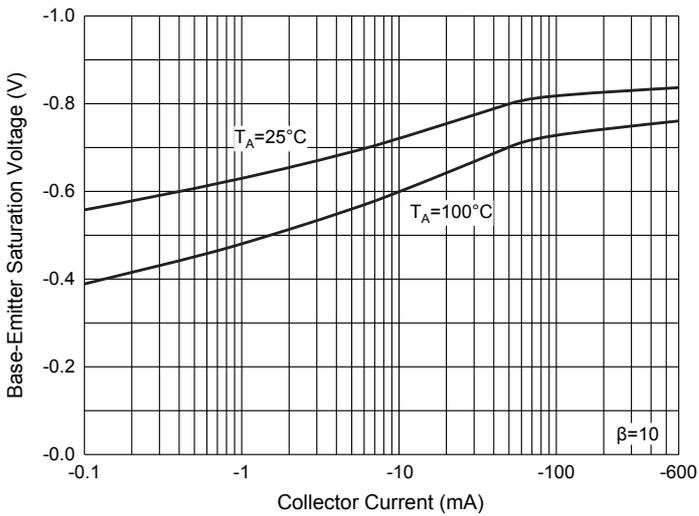


Fig. 4 - Collector-Emitter Saturation Voltage Characteristics

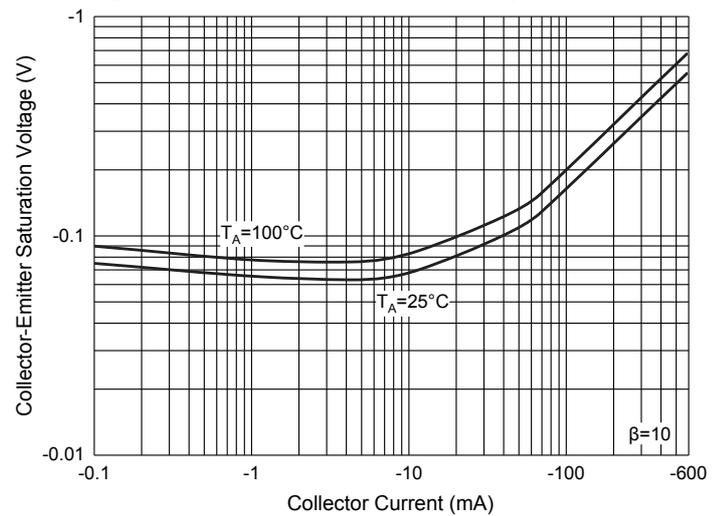


Fig. 5 - Base-Emitter Voltage Characteristics

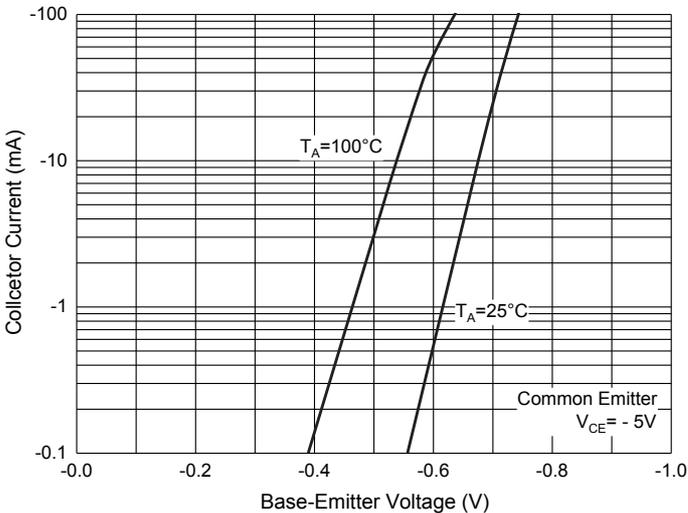
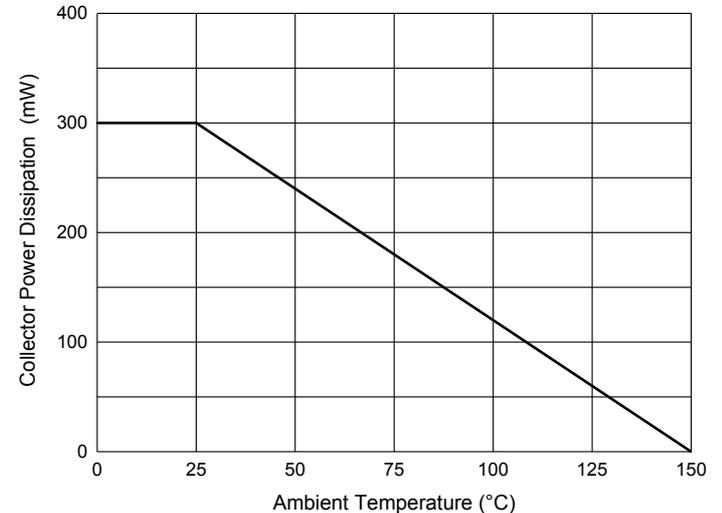


Fig. 6 - Collector Power Derating Curve





Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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