



Micro Commercial Components



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 20736 Marilla Street Chatsworth
 CA 91311
 Phone: (818) 701-4933
 Fax: (818) 701-4939

MMBT5401

PNP Plastic Encapsulate Transistor

Features

- Halogen free available upon request by adding suffix "-HF"
- Collector Current: $I_{CM}=0.6A$
- Collector-Base Voltage: $V_{(BR)CBO}=160V$
- Operating And Storage Temperatures $-55^{\circ}C$ to $150^{\circ}C$
- Capable of 0.3Watts of Power Dissipation
- Marking: 2L
- 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

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

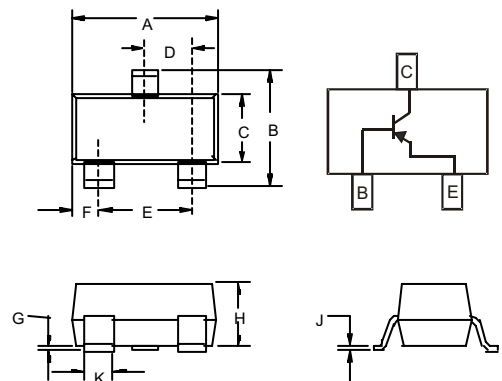
ON CHARACTERISTICS

h_{FE-1}	DC Current Gain ($V_{CE}=5.0Vdc$, $I_C=1.0mA$)	80	---	---
h_{FE-2}	DC Current Gain ($V_{CE}=5.0Vdc$, $I_C=10mA$)	100	200	---
h_{FE-3}	DC Current Gain ($V_{CE}=5.0Vdc$, $I_C=50mA$)	50	---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C=50mA$, $I_B=5.0mA$)	---	0.5	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ($I_C=50mA$, $I_B=5.0mA$)	---	1.0	Vdc

SMALL-SIGNAL CHARACTERISTICS

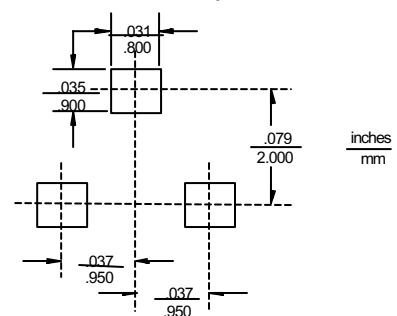
f_T	Current Gain-Bandwidth Product ($I_C=10mA$, $V_{CE}=5.0Vdc$, $f=30MHz$)	100	---	MHz
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SOT-23



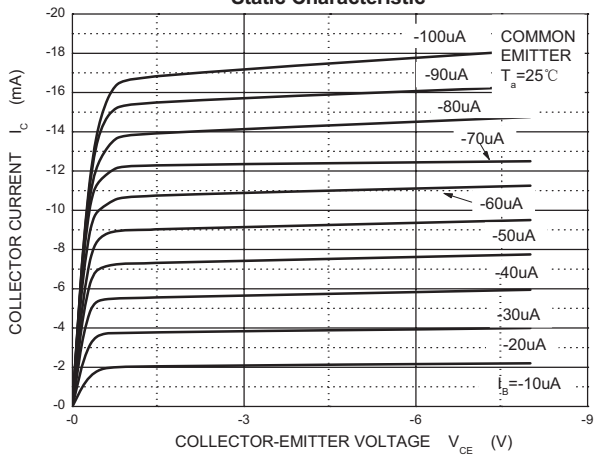
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout

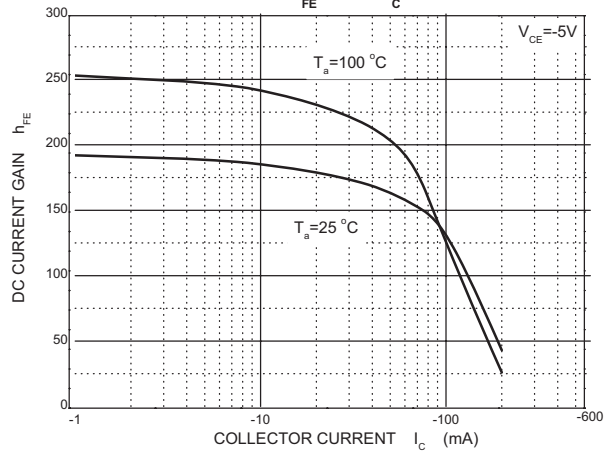


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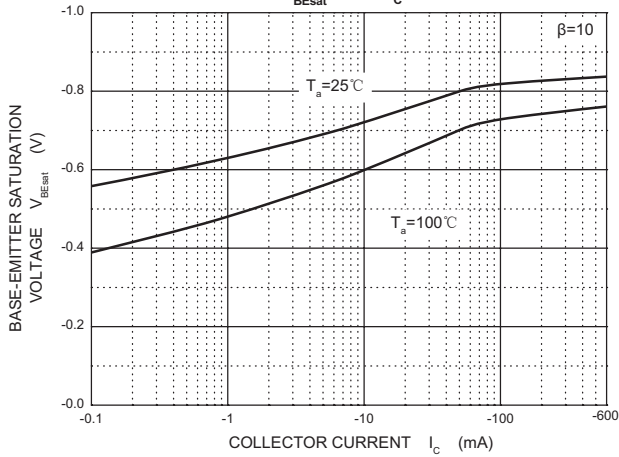
Static Characteristic



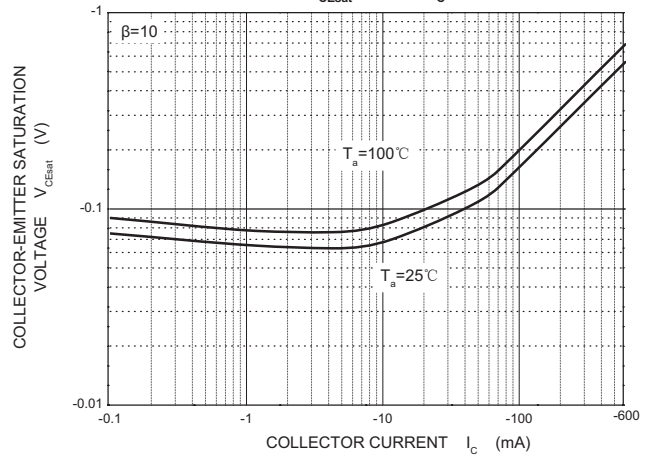
$h_{FE} - I_c$



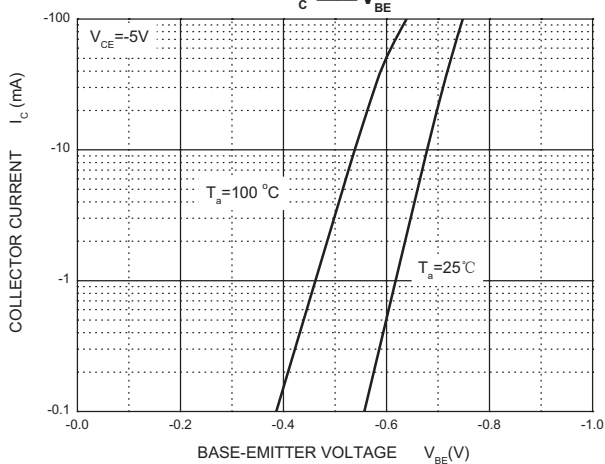
$V_{BEsat} - I_c$



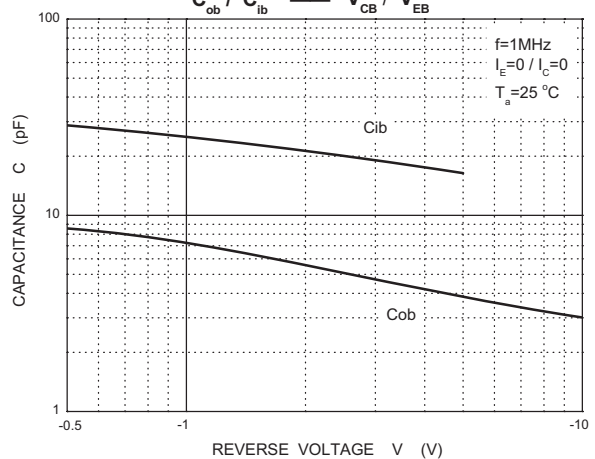
$V_{CEsat} - I_c$



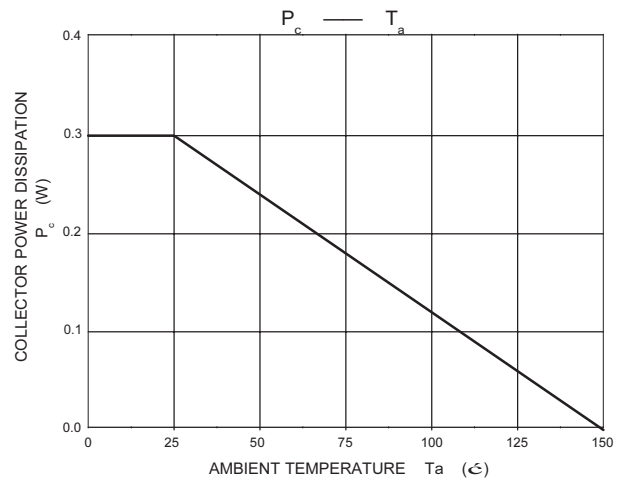
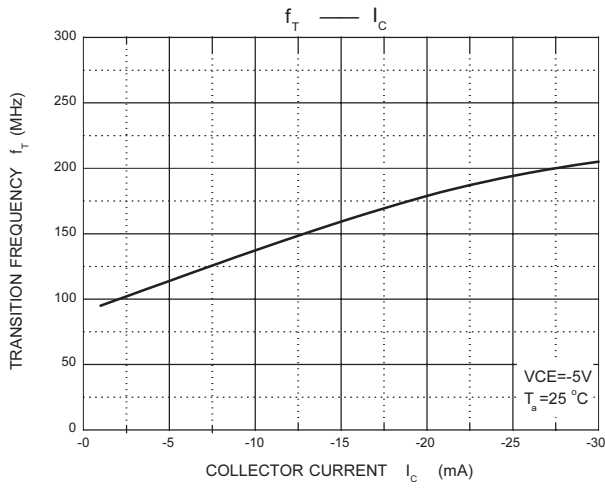
$I_c - V_{BE}$



$C_{ob} / C_{ib} - V_{CB} / V_{EB}$



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Ordering Information :

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

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

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