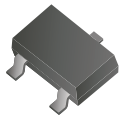
THE DATASHEET OF

MMBT5401-G

General Purpose Transistor

MMBT5401-G (PNP)

RoHS Device



Features

-Epitaxial planar die construction.
-Complementary NPN type available (MMBT5551-G).
-Ideal for medium power amplification and switching.

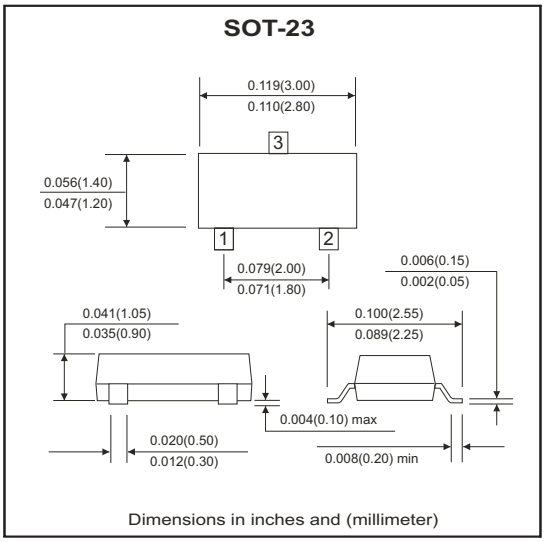
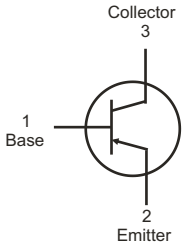


Diagram:



Marking: 2L

Maximum Ratings (at T_A=25°C unless otherwise noted)

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	-0.6	A
Collector dissipation	P_C	0.3	W
Junction and storage temperature	T_J, T_{STG}	-55 ~ +150	°C

Electrical Characteristics (at T_A=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Max	Unit
Collector-base breakdown voltage	I_C=-100μA, I_E=0	$V_{(BR)CBO}$	-160		V
Collector-emitter breakdown voltage	I_C=-1mA, I_B=0	$V_{(BR)CEO}$	-150		V
Emitter-base breakdown voltage	I_E=-10μA, I_C=0	$V_{(BR)EBO}$	-5		V
Collector cut-off current	V_{CB}=-120V, I_E=0	I_{CBO}		-0.1	μA
Emitter cut-off current	V_{EB}=-4V, I_C=0	I_{EBO}		-0.1	μA
DC current gain	V_{CE}=-5V, I_C=-1mA	$h_{FE(1)}$	80		
	V_{CE}=-5V, I_C=-10mA	$h_{FE(2)}$	100	200	
	V_{CE}=-5V, I_C=-50mA	$h_{FE(3)}$	50		
Collector-emitter saturation voltage	I_C=-50mA, I_B=-5mA	$V_{CE(sat)}$		-0.5	V
Base-emitter saturation voltage	I_C=-50mA, I_B=-5mA	$V_{BE(sat)}$		-1	V
Transition frequency	V_{CE}=-5V, I_C=-10mA, f=30MHz	f_T	100		Mhz

RATING AND CHARACTERISTIC CURVES (MMBT5401-G)

Fig.1 Max Power Dissipation vs. Ambient Temperature

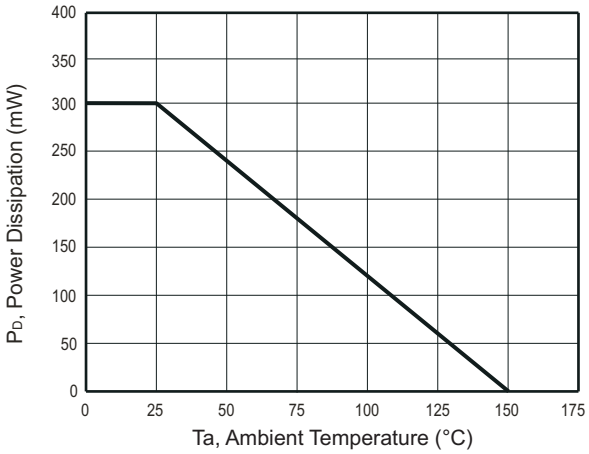


Fig.2 Collector Emitter Saturation Voltage vs. Collector Current

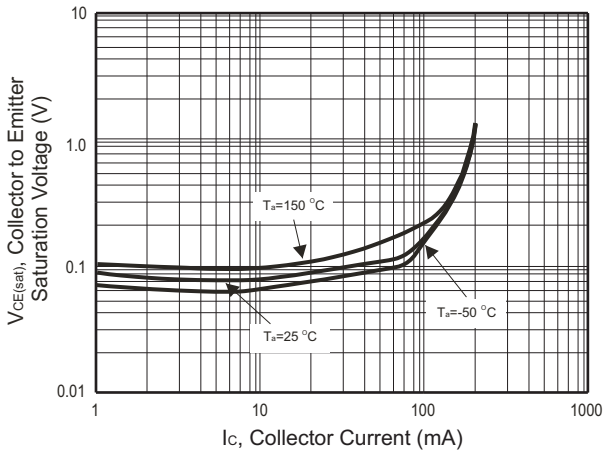


Fig.3 DC Current Gain vs. Collector Current

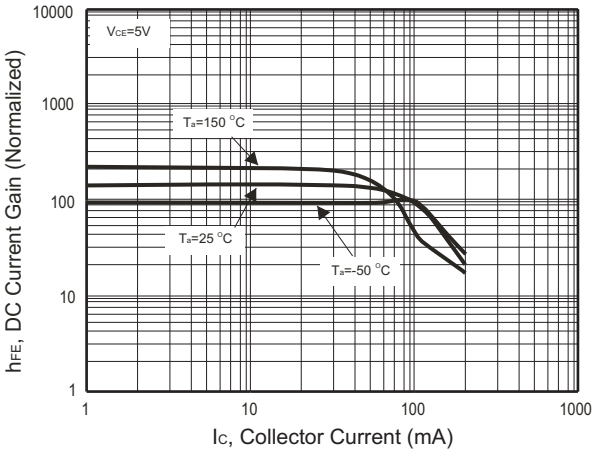


Fig.4 Base Emitter Voltage vs. Collector Current

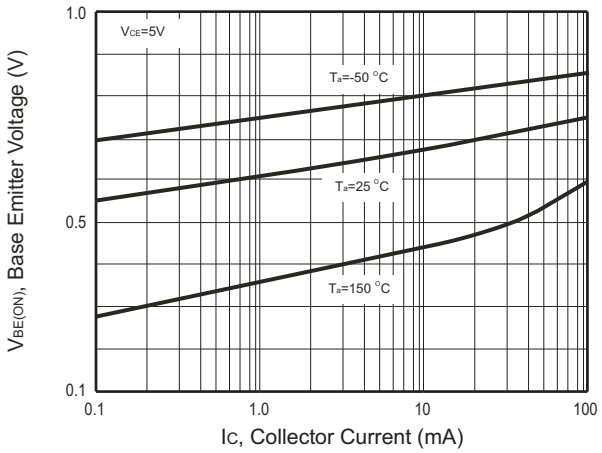
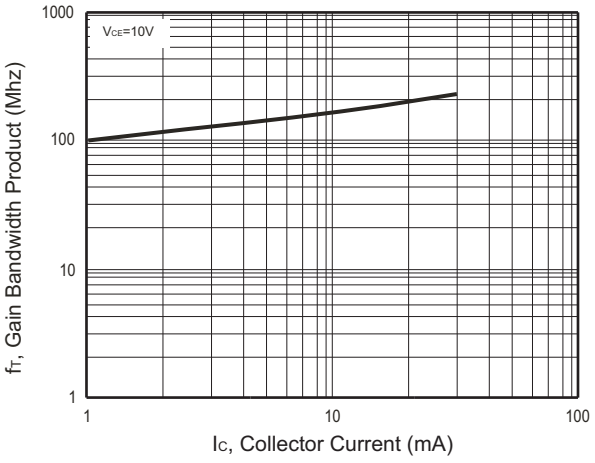
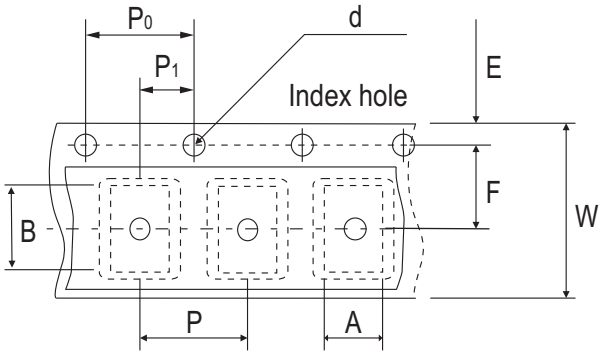
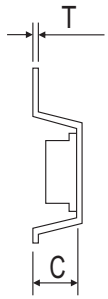


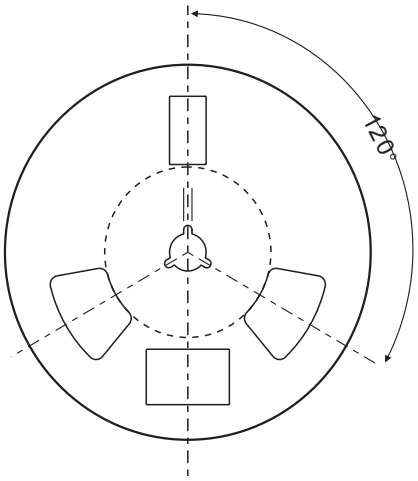
Fig.5 Gain Bandwidth Product vs. Collector Current

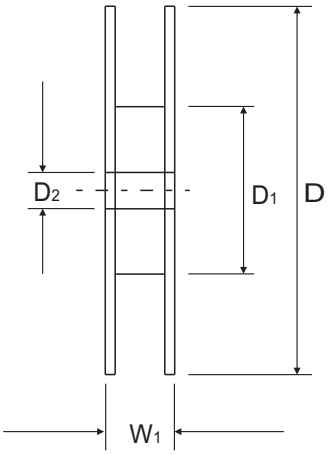


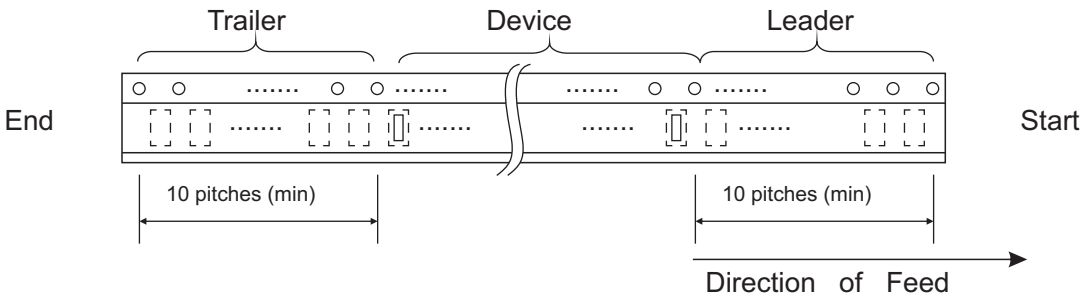
Reel Taping Specification









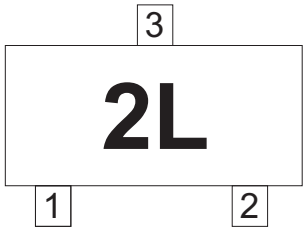


	SYMBOL	A	B	C	d	D	D_1	D_2
SOT-23	(mm)	3.10 ± 0.10	2.85 ± 0.10	1.40 ± 0.10	1.55 ± 0.10	178 ± 1	50.0 MIN.	13.0 ± 0.20
	(inch)	0.122 ± 0.004	0.112 ± 0.004	0.055 ± 0.004	0.061 ± 0.004	7.008 ± 0.04	1.969 MIN.	0.512 ± 0.008

	SYMBOL	E	F	P	P_0	P_1	W	W_1
SOT-23	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	8.00 ± 0.30	14.4 MAX.
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.315 ± 0.012	0.567 MAX.

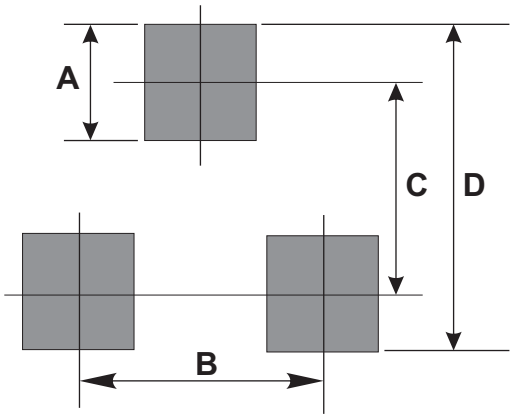
Marking Code

Part Number	Marking Code
MMBT5401-G	2L



Suggested PAD Layout

SIZE	SOT-23	
	(mm)	(inch)
A	0.80	0.031
B	1.90	0.075
C	2.02	0.080
D	2.82	0.111



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOT-23	3,000	7

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- Obsolete Management
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- Shortage Management
- Alternative Solution
- Excess Inventory Management