

## PNP General Purpose Transistor

## MMBT5401

### FEATURES

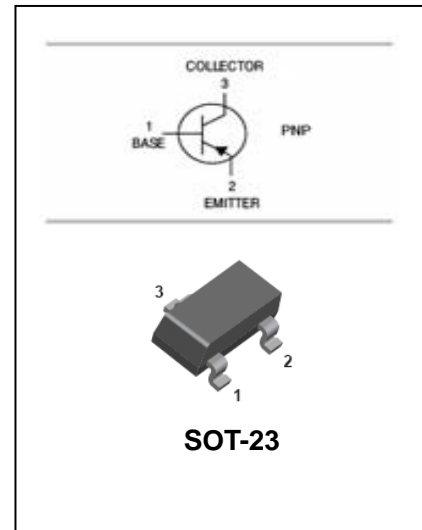
- Epitaxial planar die construction.
- Complementary NPN type available (MMBT5551).
- Also available in lead free version.



Lead-free

### APPLICATIONS

- Ideal for medium power amplification and switching



### ORDERING INFORMATION

Type No.	Marking	Package Code
MMBT5401	2L	SOT-23

### MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	UNIT
V <sub>CB0</sub>	collector-base voltage	-160	V
V <sub>CEO</sub>	collector-emitter voltage	-150	V
V <sub>EBO</sub>	emitter-base voltage	-5	V
I <sub>C</sub>	collector current (DC)	-0.6	A
P <sub>D</sub>	Total device dissipation	0.35	W
R <sub>θJC</sub>	Thermal resistance, junction to ambient	357	°C/W
T <sub>j</sub> , T <sub>stg</sub>	junction and storage temperature	-55 to +150	°C



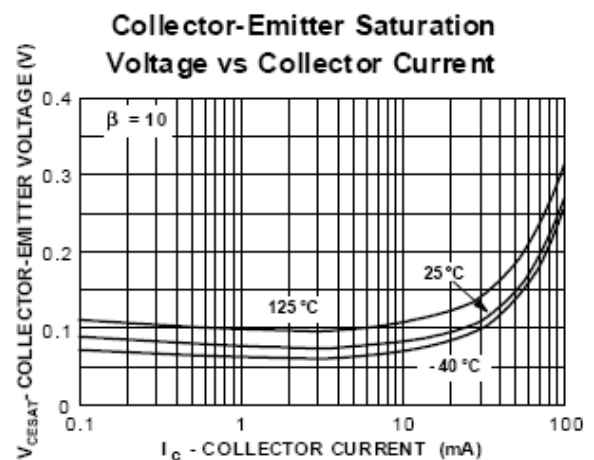
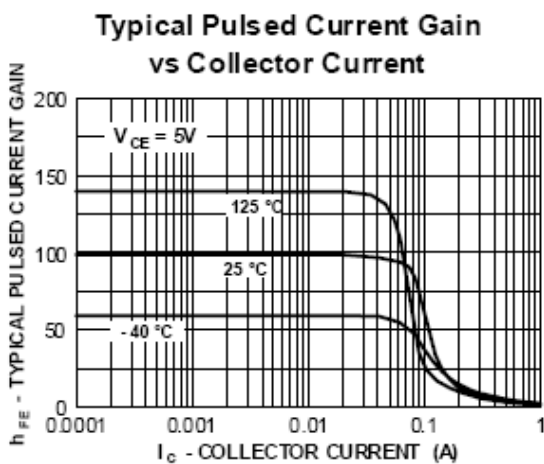
**PNP General Purpose Transistor**

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**ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified**

Symbol	Parameter	Test conditions	MIN.	MAX.	UNIT
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = -100\mu A, I_E = 0$	-160		
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = -1mA, I_B = 0$	-150		
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = -10\mu A, I_C = 0$	-5		
$I_{CBO}$	collector cut-off current	$I_E = 0; V_{CB} = -120V$	-	-50	nA
$I_{EBO}$	emitter cut-off current	$I_C = 0; V_{EB} = -3V$	-	-50	nA
$h_{FE}$	DC current gain	$V_{CE} = -5V; I_C = -1mA$ $V_{CE} = -5V; I_C = -10mA$ $V_{CE} = -5V; I_C = -50mA$	50 100 50	- 300 -	
$V_{CE(sat)}$	collector-emitter saturation voltage	$I_C = -10mA; I_B = -1mA$ $I_C = -50mA; I_B = -5mA$	-	-0.2 -0.5	V
$V_{BE(sat)}$	base-emitter saturation voltage	$I_C = -10mA; I_B = -1mA$ $I_C = -50mA; I_B = -5mA$	-	-1 -1	V
$f_T$	transition frequency	$I_C = -10mA; V_{CE} = -10V;$ $f = 100MHz$	100	300	MHz
$C_{obo}$	Output capacitance	$I_E = 0; V_{CB} = -10V,$ $f = 1.0MHz$		6.0	pF

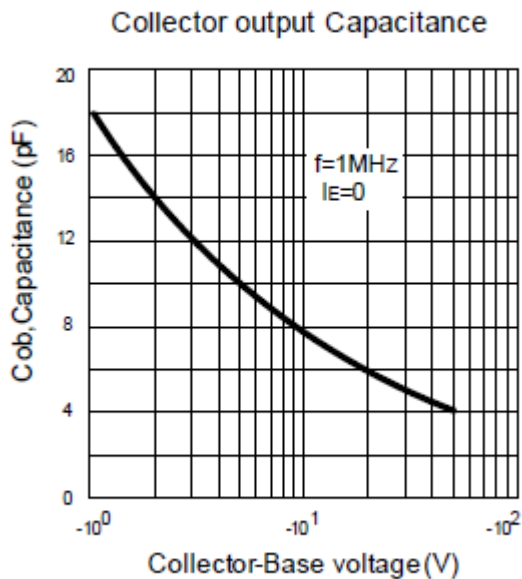
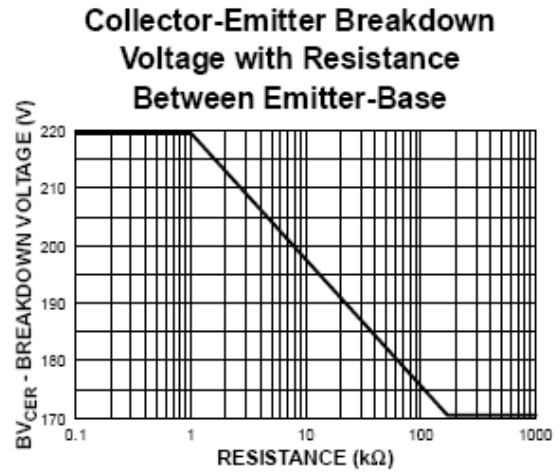
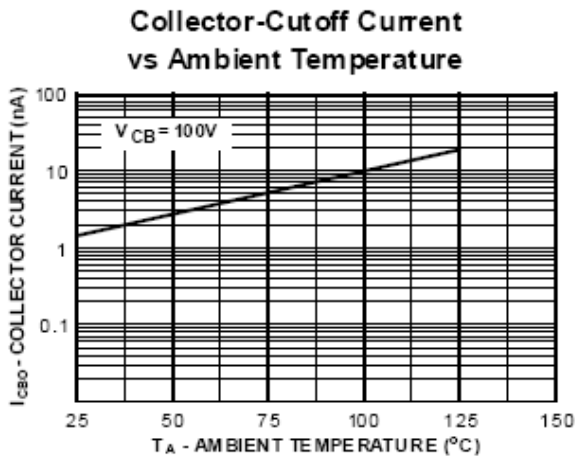
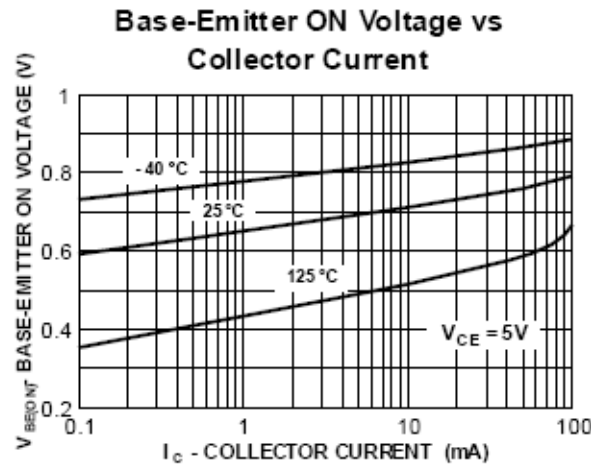
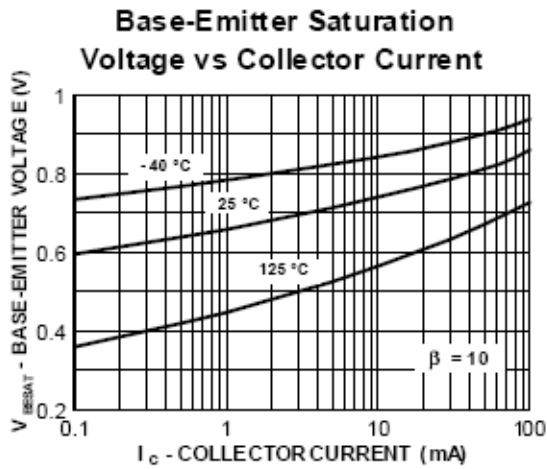
**TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified**





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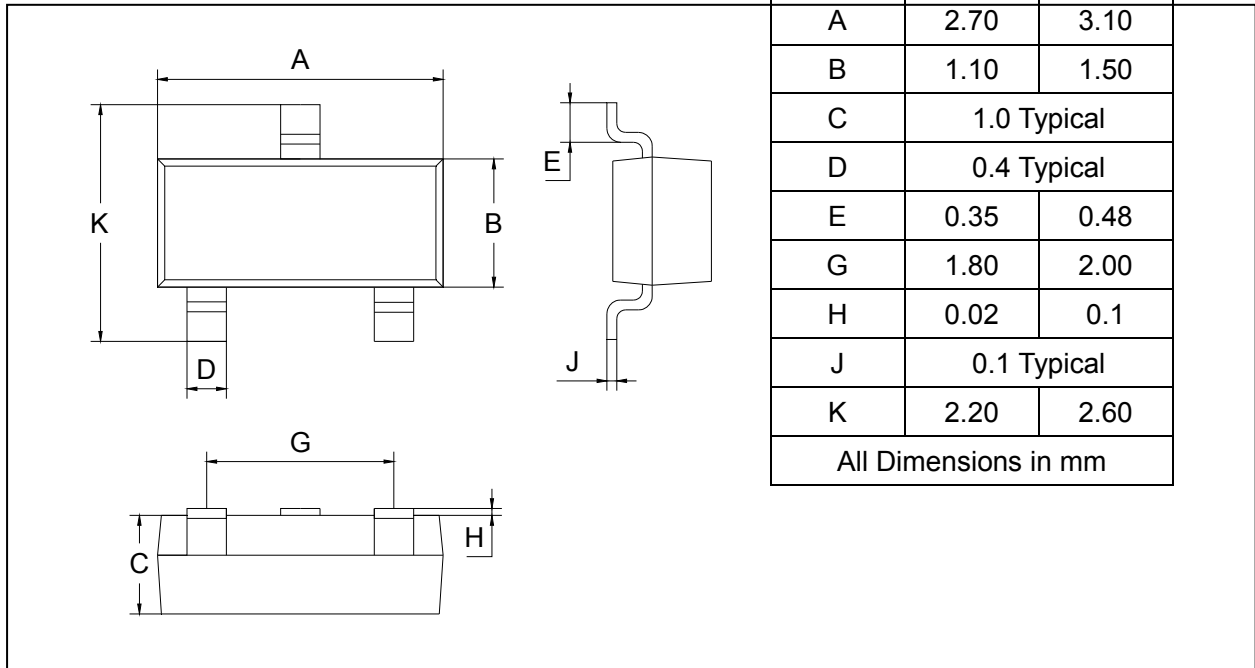


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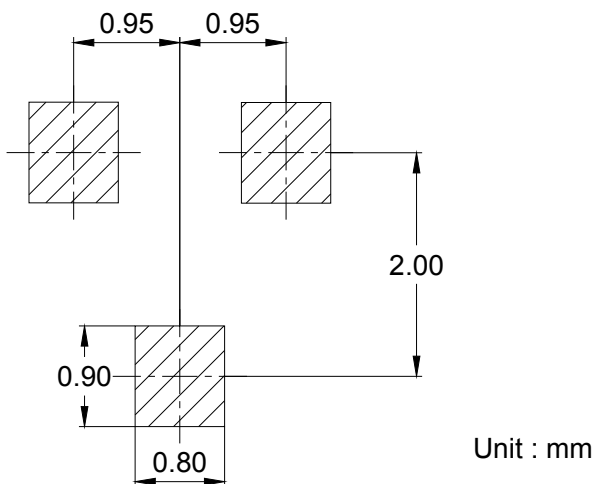
**MMBT5401**

**PACKAGE OUTLINE**

Plastic surface mounted package  
SOT-23



**SOLDERING FOOTPRINT**



**PACKAGE INFORMATION**

Device	Package	Shipping
MMBT5401	SOT-23	3000/Tape&Reel