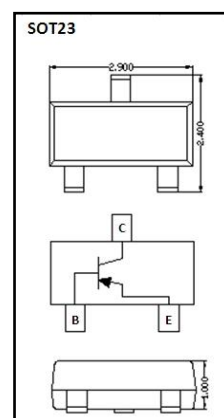


DATA SHEET

MMBT5401

- ◇ Capable of 300mWatts of Power Dissipation
- ◇ Operating and Storage Junction Temperatures: -55°C to 150°C
- ◇ Surface Mount SOT-23 Package
- ◇ RoHS compliant / Green EMC

Device Marking Code	
MMBT5401	2L



MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-160	V
V_{CEO}	Collector-Emitter Voltage	-150	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-600	mA
P_c	Collector Power Dissipation	300	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	416	$^{\circ}\text{C}/\text{W}$
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	$-55 \sim +150$	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS @ 25°C Unless Otherwise Specified

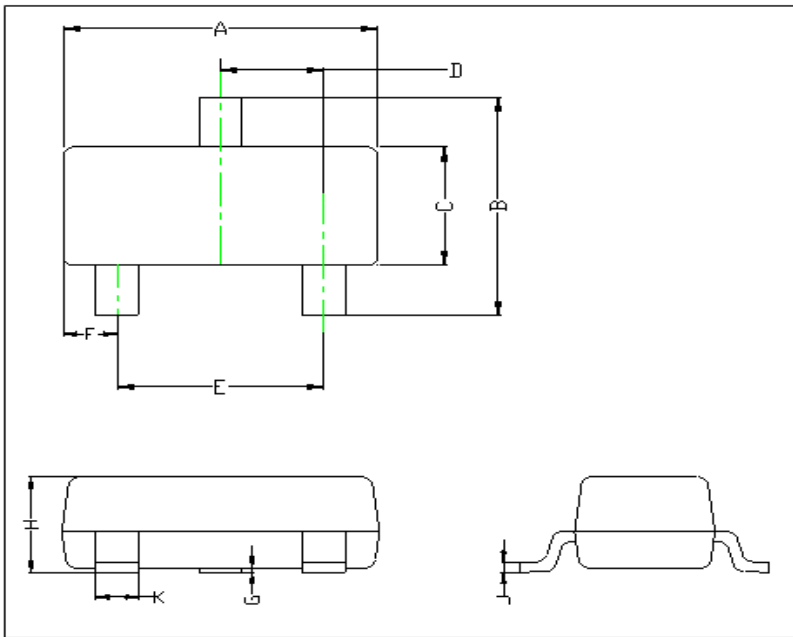
Symbol	Parameter	Test Conditions	Min	Max	Units
V_{CEO}	Collector-Emitter Breakdown Voltage	$I_C=-1.0\text{mA}, I_B=0$	-150		V
V_{CBO}	Collector-Base Breakdown Voltage	$I_C=-100\mu\text{A}, I_E=0$	-160		V
V_{EBO}	Emitter-Base Breakdown Voltage	$I_E=-100\mu\text{A}, I_C=0$	-5.0		V
I_{CBO}	Collector Cutoff Current	$V_{CB}=-120\text{V}, I_E=0$		-100	nA
I_{EBO}	Emitter cut-off current	$V_{EB}=-4\text{V}, I_C=0$		-100	nA

h_{FE}	DC Current Gain	$I_C = -1mA, V_{CE} = -5V$ $I_C = -10mA, V_{CE} = -5V$ $I_C = -50mA, V_{CE} = -5V$	80 100 50	300	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -50mA, I_B = -5.0mA$		-0.5	
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -50mA, I_B = -5.0mA$		-1.0	V
f_T	Current Gain-Bandwidth Product	$I_C = -10mA,$ $V_{CE} = -5.0V, f = 30MHz$	100		MHZ

ORDERING INFORMATION

Device	Package	Shipping	Tape wide	Emboss pitch	Tape specification	Notes
MMBT5401	SOT23	Tape & Reel 3000pcs /7" Reel	8mm	4mm	Conductive	

PACKAGE DIMENSIONS

Package Outline : SOT23		
	Symbol	Dimensions in mm
		Min. Max.
	A	2.800 3.040
	B	2.100 2.640
	C	1.200 1.400
	D	0.890 1.030
	E	1.780 2.050
	F	0.450 0.600
	G	0.013 0.100
	H	0.900 1.110
	J	0.090 0.180
	K	0.370 0.510
SOT23 Package Outline Note: 1. Halogen free ,EMC 2. Pb free solder 3. Lead thickness solder plating 4. Lead frame CAC-5 5. Other Tolerance ± 0.05 6. Dimensions are exclusive of Burrs Mold Flash and Tie Bar extrusions 7. Unit : mm		

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