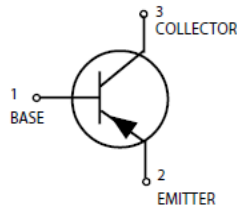
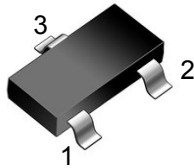


**SOT-23**



**MARKING: G1**

**Features**

As complementary type the NPN transistor MMBT5401 is recommended  
 Epitaxial planar die construction  
 Halogen free and RoHS compliant

**Mechanical Data**

SOT-23 Small Outline Plastic Package  
 EpoxyUL: 94V-0

**Summary of Packing Options**

Package	Packing Description	Packing Quantity	Industry Standard
SOT-23	Tape/Reel,7" reel	3000	EIA-481-1

**Maximum Ratings & Thermal Characteristics**

(Ratings at 25°C ambient temperature unless otherwise specified.)

Parameters	Symbol	Value	Unit
Collector-Base Voltage	V <sub>CB0</sub>	180	V
Collector-Emitter Voltage	V <sub>CEO</sub>	160	V
Emitter -Base Voltage	V <sub>EBO</sub>	6	V
Collector Current-Continuous	I <sub>C</sub>	600	mA
Collector Power Dissipation	P <sub>C</sub>	300	mW
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55-+150	°C
Thermal resistance From junction to ambient	R <sub>θJA</sub>	416	°C/W

**Electrical Characteristics**

(Ratings at 25°C ambient temperature unless otherwise specified.)

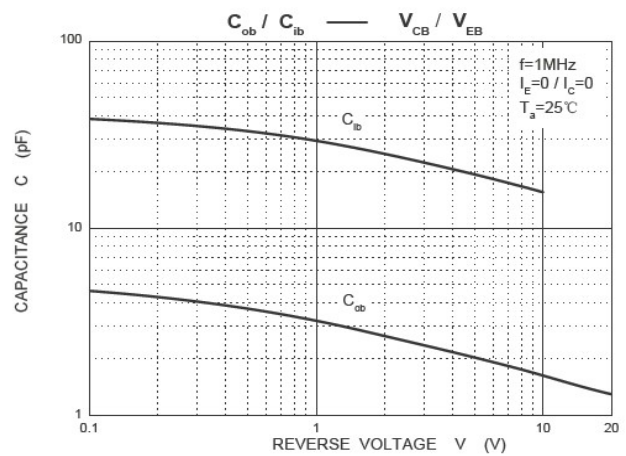
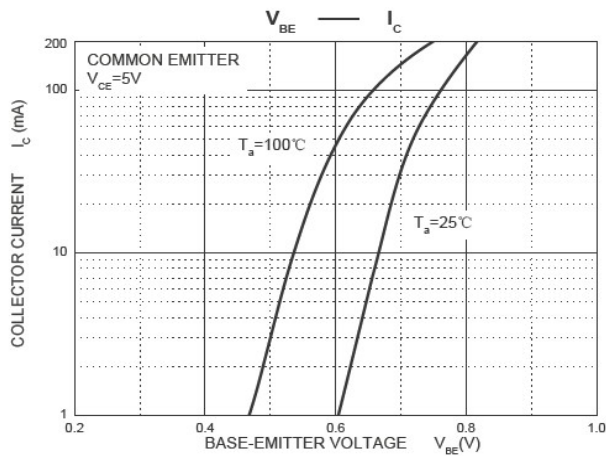
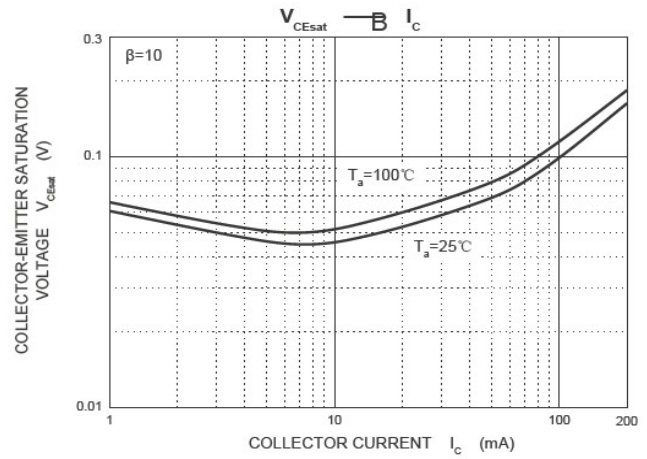
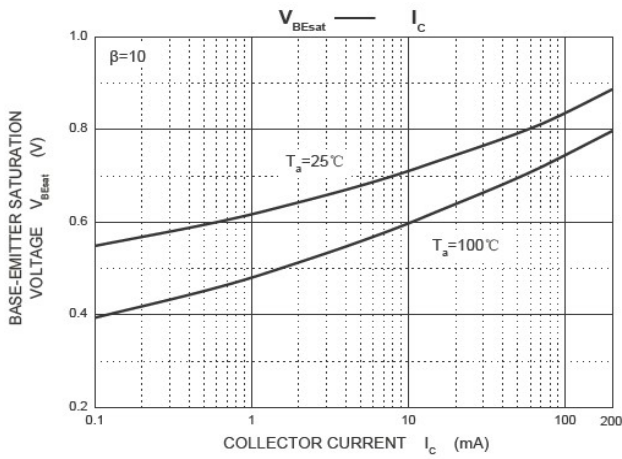
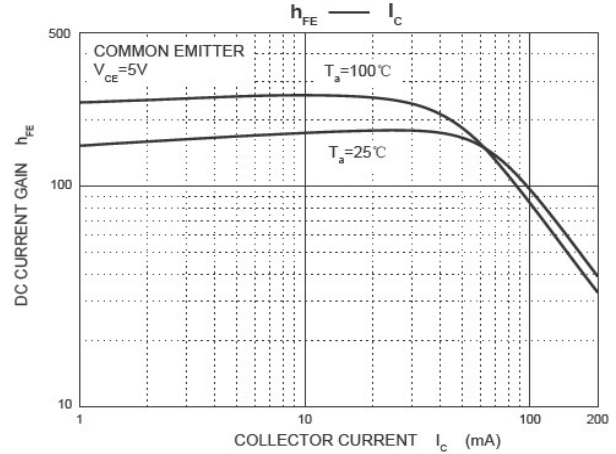
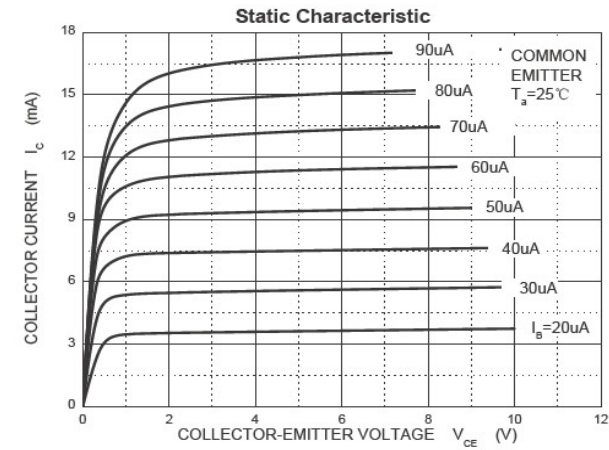
Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	V(BR)CBO	I <sub>C</sub> =100uA, I <sub>E</sub> =0	180		V
Collector-emitter breakdown voltage	V(BR)CEO *	I <sub>C</sub> =1mA, I <sub>B</sub> =0	160		V
Emitter-base breakdown voltage	V(BR)EBO	I <sub>E</sub> =10uA, I <sub>C</sub> =0	6		V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =120V, I <sub>E</sub> =0		50	nA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =4V, I <sub>C</sub> =0		50	nA
DC current gain	h <sub>FE</sub> (1) *	V <sub>CE</sub> =5V, I <sub>C</sub> =1mA	80		
	h <sub>FE</sub> (2) *	V <sub>CE</sub> =5V, I <sub>C</sub> =10mA	100	300	
	h <sub>FE</sub> (3) *	V <sub>CE</sub> =5V, I <sub>C</sub> =50mA	30		
Collector-emitter saturation voltage	V <sub>CE(sat)1</sub> *	I <sub>C</sub> =10mA, I <sub>B</sub> =1mA		0.15	V
	V <sub>CE(sat)2</sub> *	I <sub>C</sub> =50mA, I <sub>B</sub> =5mA		0.20	V
Base -emitter saturation voltage	V <sub>BE(sat)1</sub> *	I <sub>C</sub> =10mA, I <sub>B</sub> =1mA		1.00	V
	V <sub>BE(sat)2</sub> *	I <sub>C</sub> =50mA, I <sub>B</sub> =5mA		1.00	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =10mA, f=100MHz	100	300	MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz		6	pF

\*Pulse test: pulse width ≤ 300us, duty cycle ≤ 2.0%

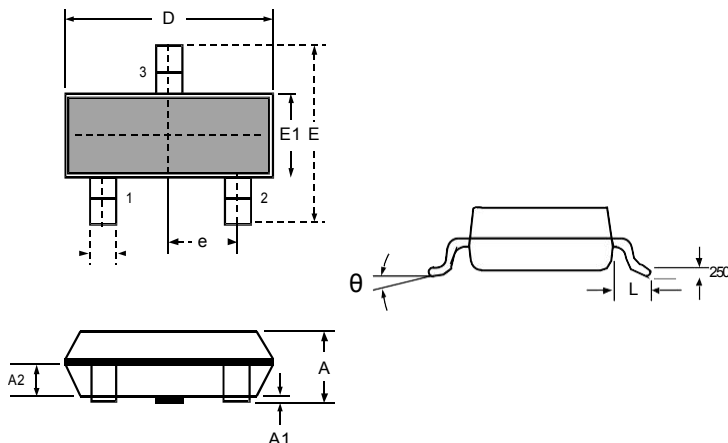
**CLASSIFICATION OF h<sub>FE</sub>(2)**

HFE	100-300	
RANK	L	H
RANGE	100-200	200-300

## Ratings and Characteristic Curves



## Package Outline Dimensions: SOT-23



### DIMENSIONS

SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
D	2.800	3.000	0.110	0.118
b	0.300	0.500	0.012	0.020
E	2.250	2.550	0.089	0.100
E1	1.200	1.400	0.047	0.055
e	0.950 BSC		0.037 BSC	
L	0.300	0.500	0.012	0.020
$\theta$	0	$8^\circ$	0	$8^\circ$