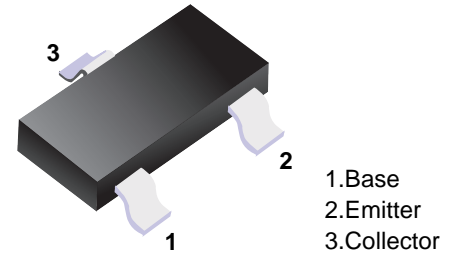


MMBT5401

PNP Transistors



■ Simplified outline(SOT-23)

■ Features

- High Voltage Transistors
- Pb-Free Packages are Available

■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V _{CB0}	-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 Power Dissipation	P _C	300	mW
Junction and storage temperature	T _J , T _{stg}	-55 to +150	°C

■ Electrical Characteristics Ta = 25°C

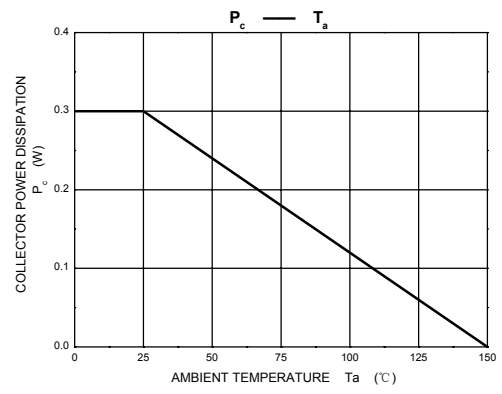
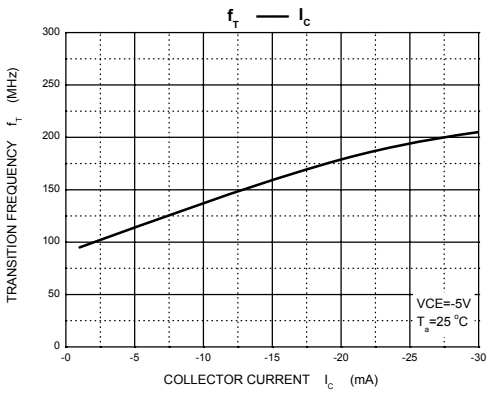
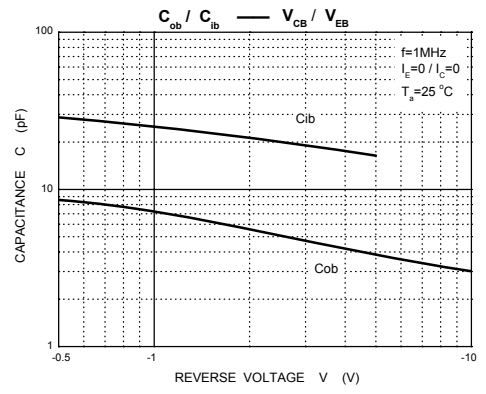
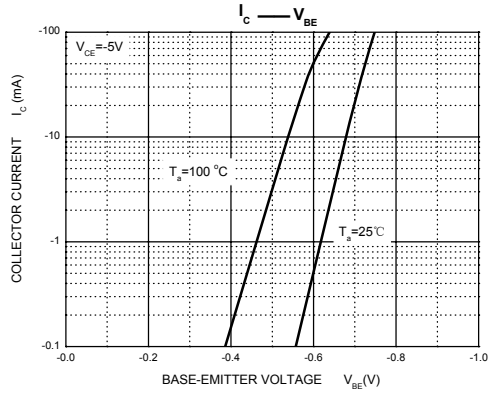
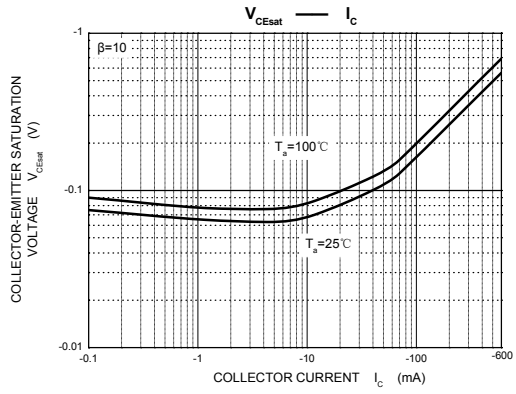
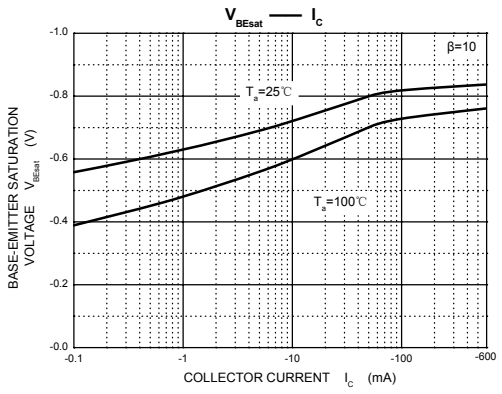
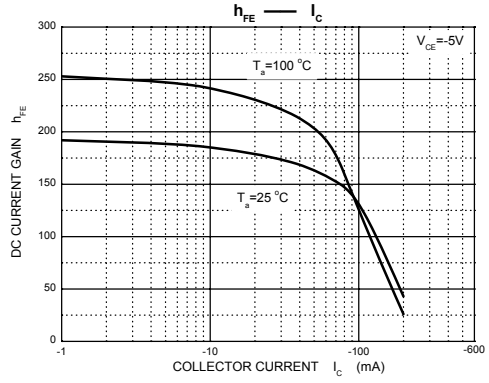
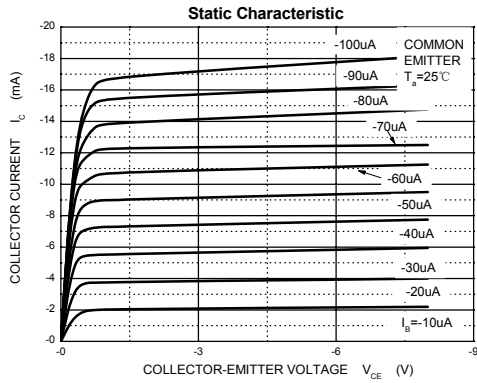
Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{CB0}	I _C = -100 μA, I _E = 0	-160			V
Collector-emitter breakdown voltage *	V _{CEO}	I _C = -1.0 mA, I _B = 0	-150			V
Emitter-base breakdown voltage	V _{EBO}	I _E = -10 μA, I _C = 0	-5			V
Collector cutoff current	I _{CB0}	V _{CB} = -120 V, I _E = 0			-0.1	μA
Emitter cutoff current	I _{EBO}	V _{EB} = -4.0 V, I _C = 0			-0.1	μA
DC current gain *	h _{FE}	I _C = -1.0 mA, V _{CE} = -5 V	80			
		I _C = -10 mA, V _{CE} = -5 V	100		300	
		I _C = -50 mA, V _{CE} = -5 V	50			
Collector-emitter saturation voltage *	V _{CE(sat)}	I _C = -50 mA, I _B = -5.0 mA			-0.5	V
Base-emitter saturation voltage *	V _{BE(sat)}	I _C = -50 mA, I _B = -5.0 mA			-1.0	V
Transistor frequency	f _T	V _{CE} = -5V, I _C = -10mA, f = 30MHz	100			MHz

* Pulse Test: Pulse Width = 300 μs, Duty Cycle=2.0%.

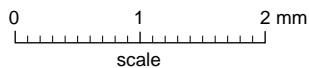
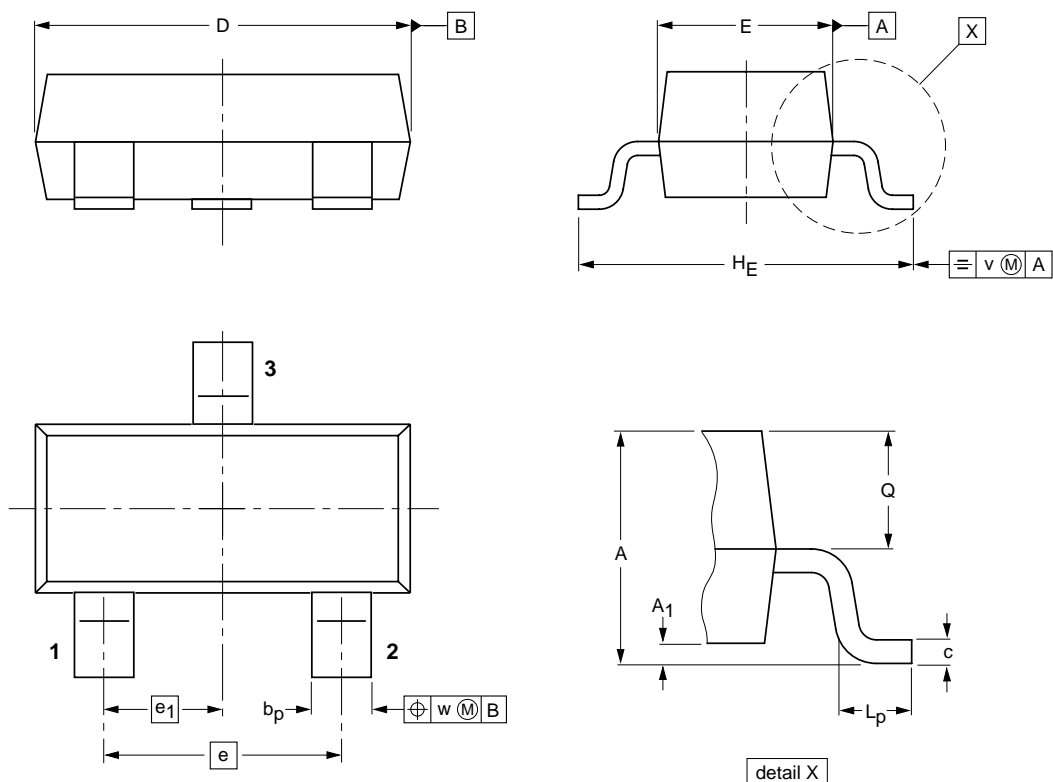
■ Classification of h_{FE}(2)

Type	MMBT5401	MMBT5401-L	MMBT5401-H
Range	100-300	100-200	200-300
Marking	2L		

■ Typical Characteristics



■ SOT-23



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max.	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1