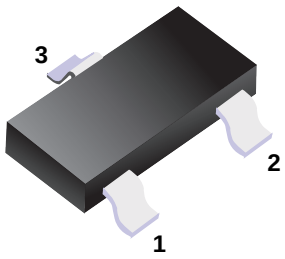
MMBT5401

PNP Transistors



1.Base
2.Emitter
3.Collector

Simplified outline(SOT-23)

Features

- High Voltage Transistors
- Pb-Free Packages are Available

Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	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 Power Dissipation	Pc	300	mW
Junction and storage temperature	T_J, T_{stg}	-55 to +150	℃

Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CBO}	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_{CBO}	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
Transiston frequency	f_T	V_{CE}=-5V,I_C=-10mA,f=30MHz	100			MHz

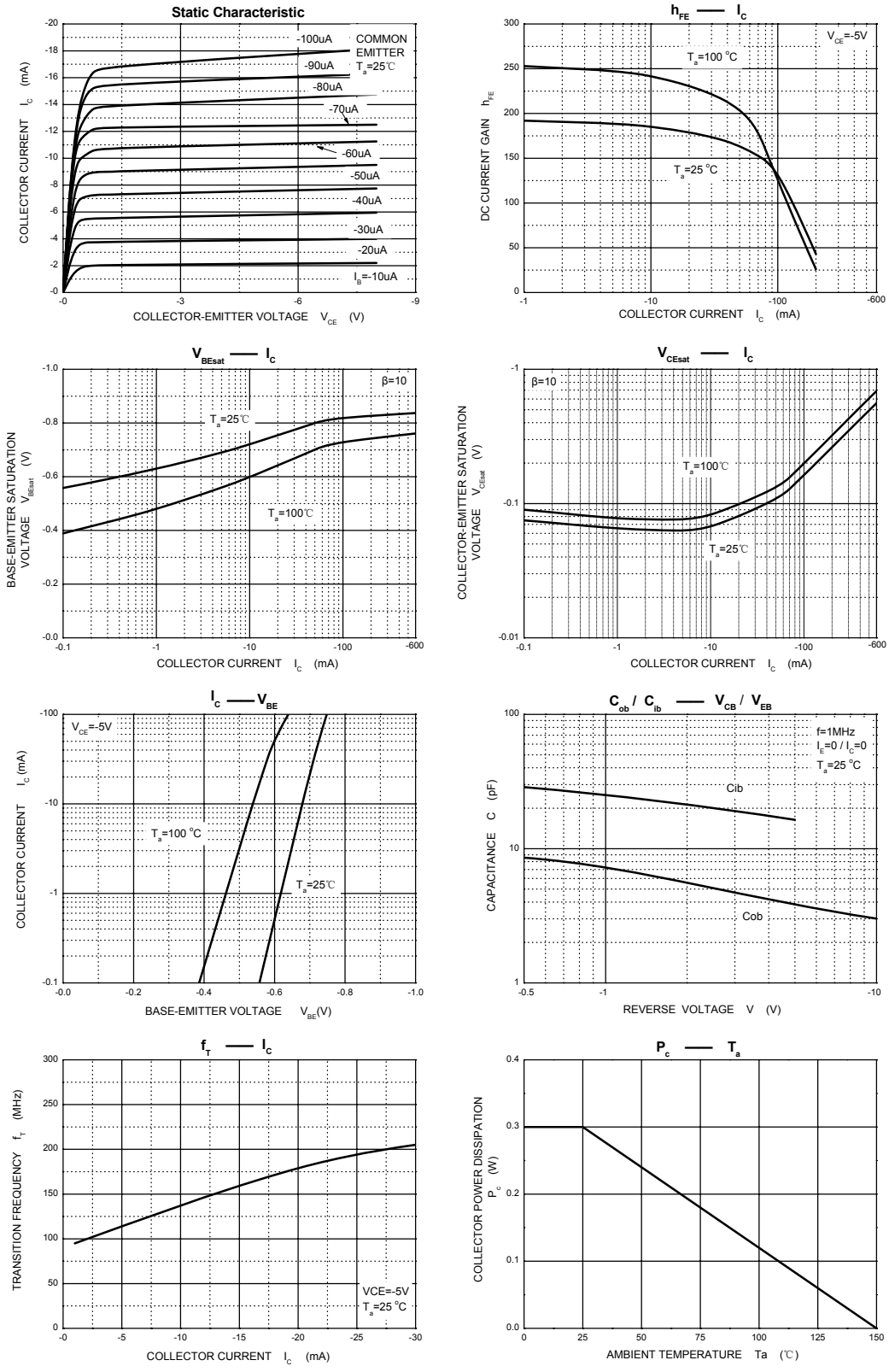
* Pulse Test: Pulse Width = 300 μs, Duty Cycle=2.0%.

Classification of $h_{fe(2)}$

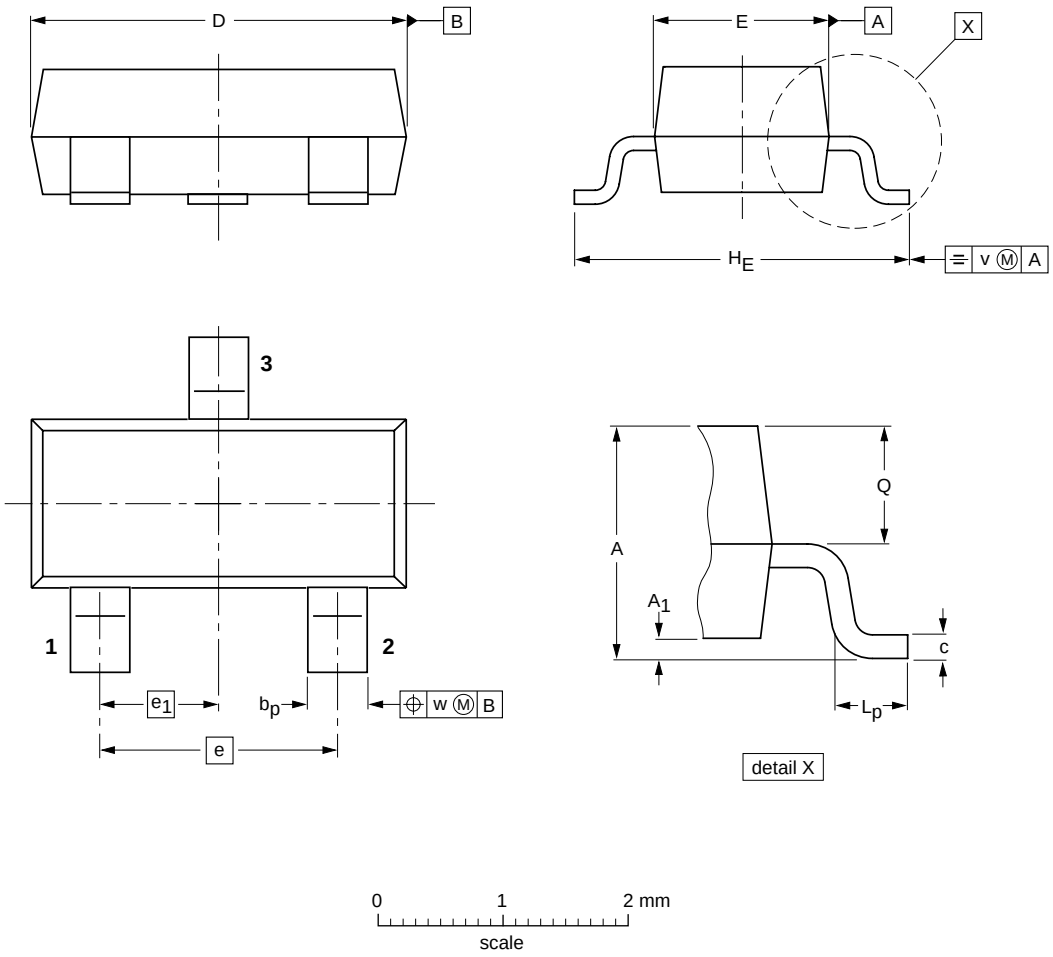
Type	MMBT5401	MMBT5401-L	MMBT5401-H
Range	100-300	100-200	200-300
Marking	2L		

MMBT5401

■ 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