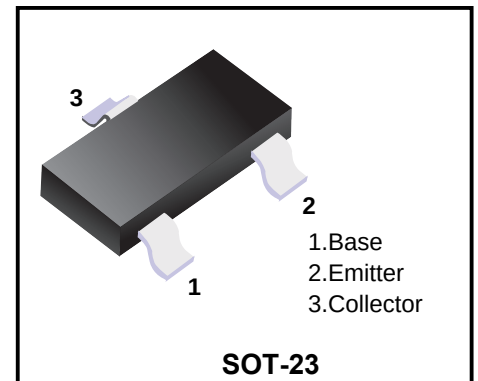


PNP Transistors

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 _{CE0}	-150	V
Emitter-base voltage	V _{EB0}	-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 unless otherwise specified.)

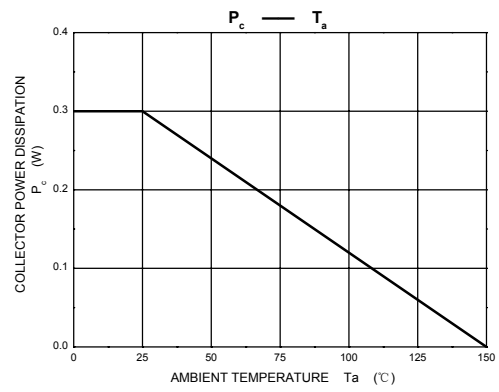
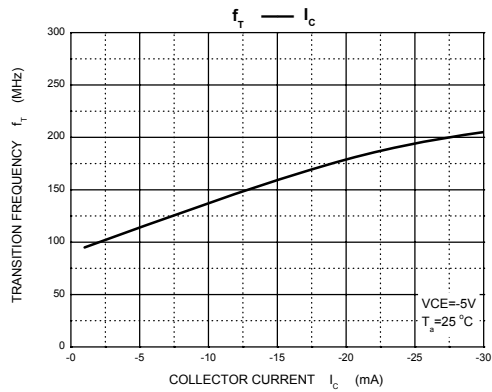
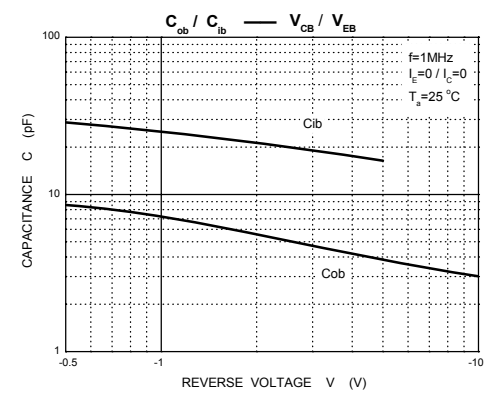
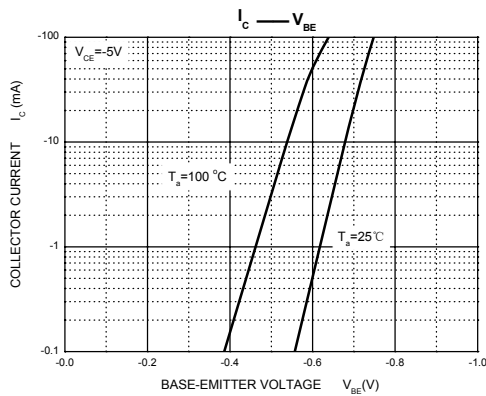
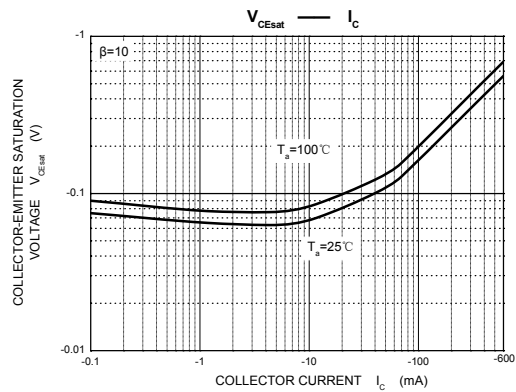
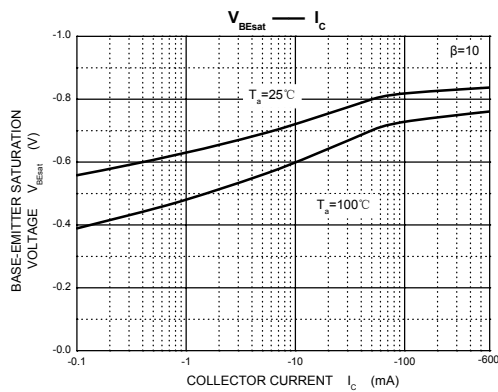
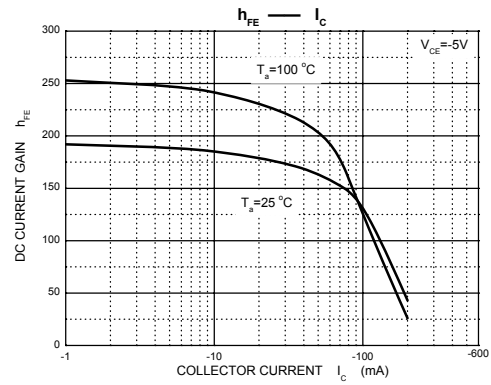
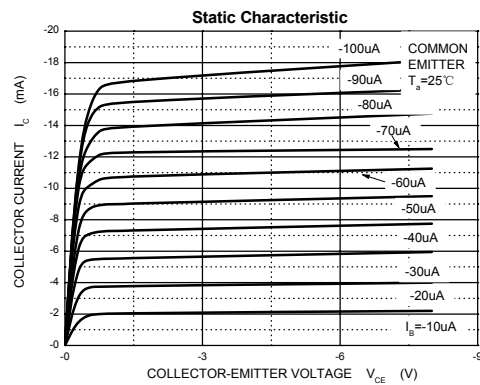
Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{CB0}	I _C = -100 μA, I _E = 0	-160			V
Collector-emitter breakdown voltage *	V _{CE0}	I _C = -1.0 mA, I _B = 0	-150			V
Emitter-base breakdown voltage	V _{EB0}	I _E = -10 μA, I _C = 0	-5			V
Collector cutoff current	I _{CBO}	V _{CB} = -120 V, I _E = 0			-0.1	μA
Emitter cutoff current	I _{EB0}	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%.

hFE Classification

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

Typical Characteristics



Ordering information

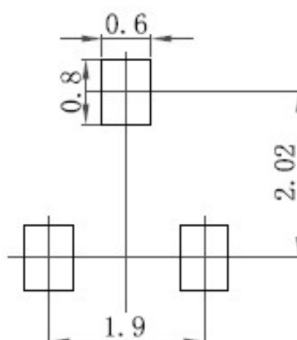
Package	Packing Description	Base Quantity	Packing Quantity
SOT-23	Tape/Reel, 7" reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

Package Dimensions

SOT-23

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.15	35	45
A1	0.1		3.9	
bp	0.38	0.48	15	19
C	0.09	0.15	3.54	5.9
D	2.8	3.0	110	118
E	1.2	1.4	47	55
E	1.9		75	
E1	0.95		37	
HE	2.1	2.55	83	100
Lp	0.15	0.45	5.9	18
Q	0.45	0.55	18	22
v	0.2		7.9	
W	0.1		4	

The recommended mounting pad size



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