



MMBT5401

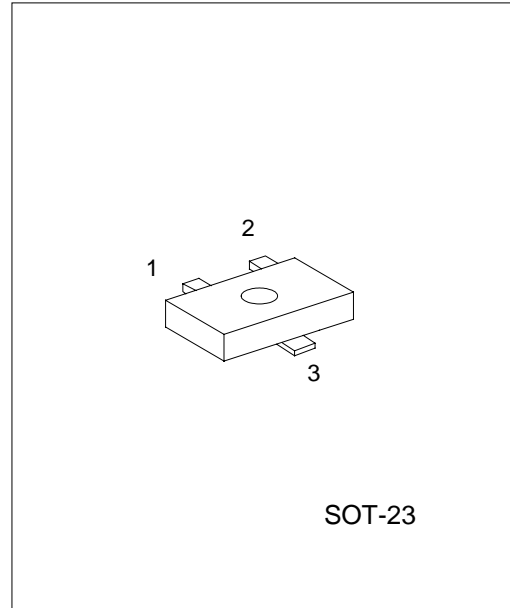
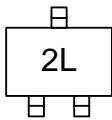
PNP EPITAXIAL SILICON TRANSISTOR

HIGH VOLTAGE SWITCHING TRANSISTOR

■ FEATURES

- *Collector-Emitter Voltage: $V_{CE0}=-150V$
- *Collector Dissipation: $P_c(max)=350mW$
- *High current gain

■ MARKING



*Pb-free plating product number:MMBT5401L

■ PIN CONFIGURATION

PIN NO.	PIN NAME
1	Emitter
2	Base
3	Collector

■ ORDERING INFORMATION

Order Number		Package	Packing
Normal	Lead free		
MMBT5401-AE3-R	MMBT5401L-AE3-R	SOT-23	Tape Reel

MMBT5401

PNP EPITAXIAL SILICON TRANSISTOR

■ ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector -Base Voltage	V _{CB0}	-160	V
Collector -Emitter Voltage	V _{CE0}	-150	V
Emitter -Base Voltage	V _{EBO}	-5	V
DC Collector Current	I _C	-600	mA
Power Dissipation	P _D	350	mW
Operating Temperature	T _J	+150	°C
Storage Temperature	T _{STG}	-40 ~ +150	°C

■ ELECTRICAL CHARACTERISTICS (Ta= 25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	V _{CB0}	I _C =-100μA, I _E =0	-160			V
Collector-Emitter Breakdown Voltage	V _{CE0}	I _C =-1mA, I _B =0	-150			V
Emitter-Base Breakdown Voltage	V _{EBO}	I _E =-10μA, I _C =0	-6			V
Collector Cut-off Current	I _{CB0}	V _{CB} =-120V, I _E =0			-50	nA
Emitter Cut-off Current	I _{EBO}	V _{BE} =-3V, I _C =0			-50	nA
DC Current Gain(note)	h _{FE}	V _{CE} =-5V, I _C =-1mA	80			
		V _{CE} =-5V, I _C =-10mA	80		400	
		V _{CE} =-5V, I _C =-50mA	80			
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C =10mA, I _B =1mA I _C =50mA, I _B =5mA			-0.2 -0.5	V
Base-Emitter Saturation Voltage	V _{BE(sat)}	I _C =-10mA, I _B =-1mA I _C =-50mA, I _B =-5mA			1 1	V
Current Gain Bandwidth Product	f _T	V _{CE} =-10V, I _C =-10mA, f=100MHz	100		400	MHz
Output Capacitance	C _{ob}	V _{CB} =-10V, I _E =0, f=1MHz			6.0	pF
Noise Figure	N _F	I _C =-0.25mA, V _{CE} =-5V R _S =1kΩ, f=10Hz ~ 15.7kHz			8	dB

Note: Pulse test: PW<300μs, Duty Cycle<2%

■ CLASSIFICATION OF hFE

RANK	A	B	C
RANGE	80-170	150-240	200-400

■ TYPICAL CHARACTERISTICS

Fig.1 Collector output Capacitance

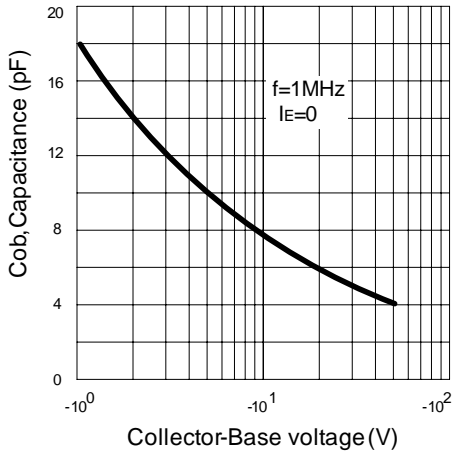


Fig.2 DC current Gain

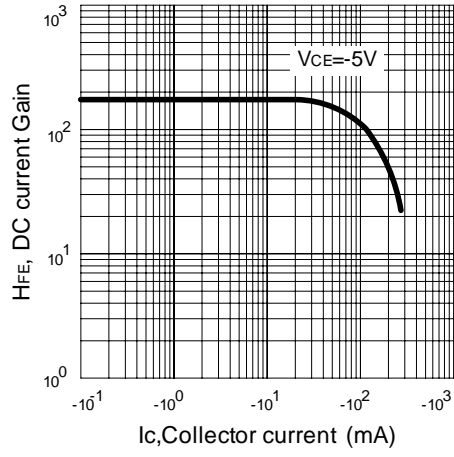


Fig.3 Base-Emitter on Voltage

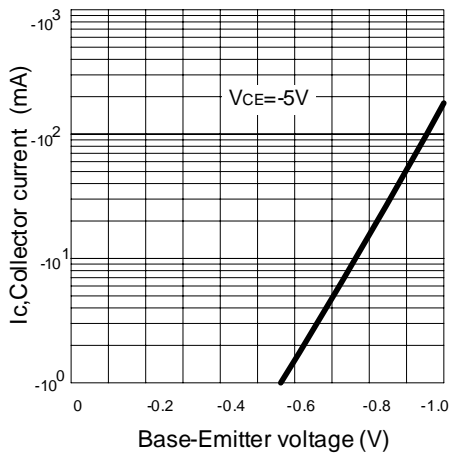


Fig.4 Saturation voltage

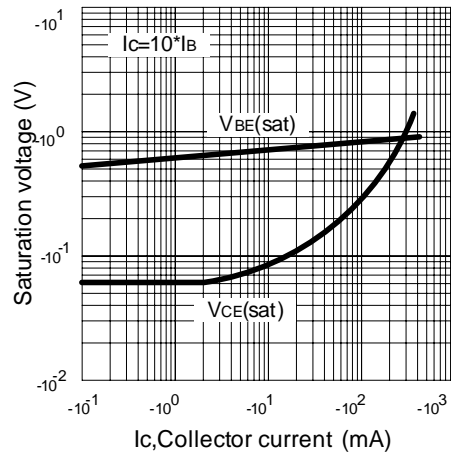
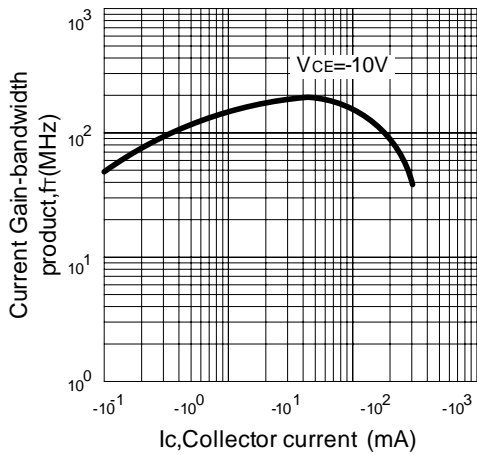


Fig.5 Current gain -bandwidth product



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