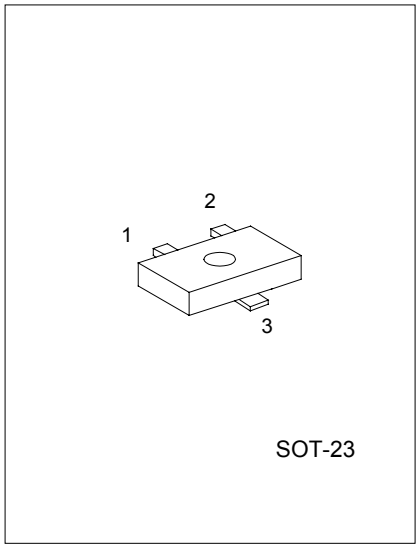
UTC MMBT5401 PNP EPITAXIAL SILICON TRANSISTOR

HIGH VOLTAGE SWITCHING TRANSISTOR



1:EMITTER 2:BASE 3:COLLECTOR

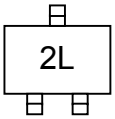
FEATURES

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

APPLICATIONS

*Telephone Switching Circuit
*Amplifier

MARKING



ABSOLUTE MAXIMUM RATINGS (Ta=25°C ,unless otherwise specified)

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 dissipation	Pc	350	mW
Collector current	Ic	-600	mA
Junction Temperature	T_j	150	°C
Storage Temperature	T_{STG}	-55 ~ +150	°C

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	BV_{CBO}	Ic=-100μA,I_E=0	-160			V
Collector-emitter breakdown voltage	BV_{CEO}	Ic=-1mA,I_B=0	-150			V
Emitter-base breakdown voltage	BV_{EBO}	I_E=-10μA,Ic=0	-6			V
Collector cut-off current	I_{CBO}	V_{CB}=-120V,I_E=0			-50	nA
Emitter cut-off current	I_{EBO}	V_{EB}=-3V,Ic=0			-50	nA
DC current gain(note)	hFE1 hFE2 hFE3	V_{CE}=-5V,Ic=-1mA V_{CE}=-5V,Ic=-10mA V_{CE}=-5V,Ic=-50mA	80 80 80		 400 	
Collector-emitter saturation voltage	V_{CE}(sat)	Ic=-10mA,I_B=-1mA Ic=-50mA,I_B=-5mA			-0.2 -0.5	V
Base-emitter saturation voltage	V_{BE}(sat)	Ic=-10mA,I_B=-1mA Ic=-50mA,I_B=-5mA			-1 -1	V

(continued)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Current gain bandwidth product	f_T	V_{CE}=-10V,Ic=-10mA,f=100MHz	100		400	MHz
Output capacitance	Cob	V_{CB}=-10V,I_E=0 f=1MHz			6.0	pF
Noise Figure	NF	Ic=-0.25mA,V_{CE}=-5V Rs=1kΩ,f=10Hz to 15.7kHz			8	dB

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

TYPICAL PARAMETERS PERFORMANCE

Fig.1 Collector output Capacitance

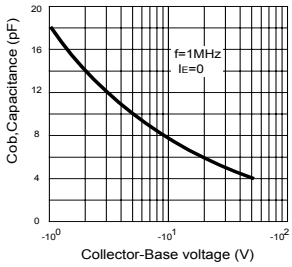


Fig.2 DC current Gain

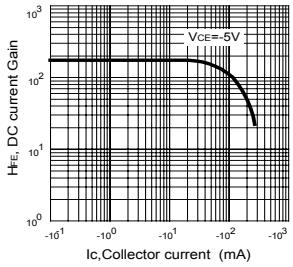


Fig.3 Base-Emitter on Voltage

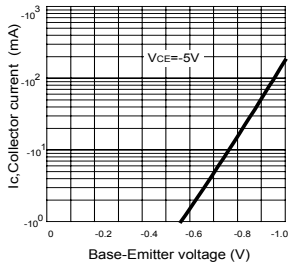


Fig.4 Saturation voltage

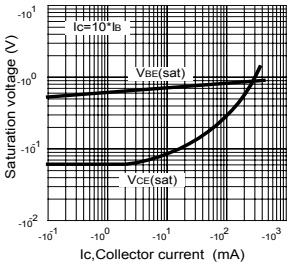


Fig.5 Current gain-bandwidth product