

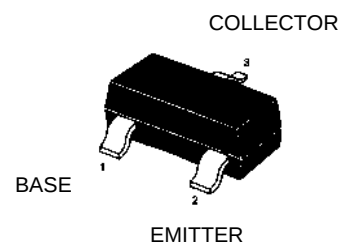


FMMT596 High Voltage Transistor

Features

SOT23 PNP silicon planar

Marking :596



SOT-23

Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V _{CB0}	-220	V
Collector-emitter voltage	V _{CEO}	-200	V
Emitter-base voltage	V _{EB0}	-5	V
Peak collector current	I _{CM}	-1	A
Collector current	I _C	-0.3	A
Base current	I _B	-200	mA
Power dissipation	P _{tot}	500	mW
Operating and storage temperature range	T _j , T _{stg}	-55 to +150	°C

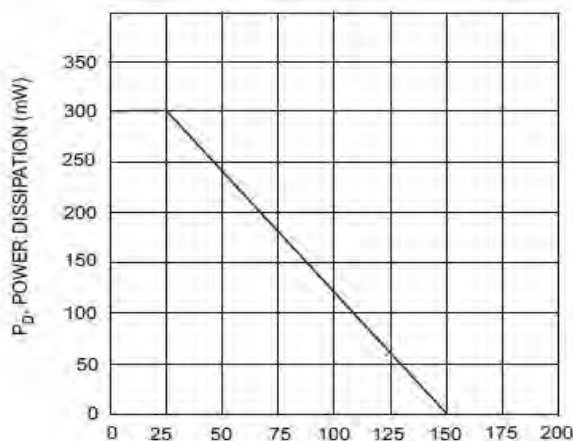
Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =-100μA	-220			V
Collector-emitter breakdown voltage *	V _{(BR)CEO}	I _C =-10mA	-200			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =-100μA	-5			V
Collector cutoff current	I _{CBO}	V _{CB} =-200V			-100	nA
Collector-Emitter Cut-Off Current	I _{CES}	V _{CE} =-200V			-100	nA
Emitter cut-off current	I _{EBO}	V _{EB} =-4V			-100	nA
Collector-emitter saturation voltage *	V _{CE(sat)}	I _C =-100mA, I _B =-10mA			-0.2	V
		I _C =-250mA, I _B =-25mA			-0.35	V
Base-emitter saturation voltage *	V _{BE(sat)}	I _C =-250mA, I _B =-25mA			-1.0	V
Base-emitter voltage *	V _{BE(ON)}	I _C =-250mA, V _{CE} =-10V			-0.9	V
Static Forward Current Transfer Ratio	h _{FE}	I _C =-1mA, V _{CE} =-10V	100			
		I _C =-100mA, V _{CE} =-10V*	100			
		I _C =-250mA, V _{CE} =-10V*	85		300	
		I _C =-400mA, V _{CE} =-10V*	35			
Current-gain-bandwidth product	f _T	I _C =-50mA, V _{CE} =-10V, f=100MHz	150			MHz
Output capacitance	C _{obo}	V _{CB} =-10V, f=1MHz			10	pF

* Pulse test: t_p = 300 μs; d ≤ 0.02.

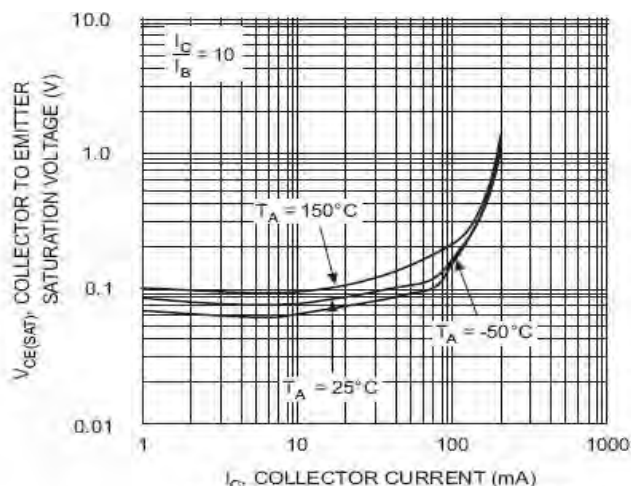


Typical Characteristics



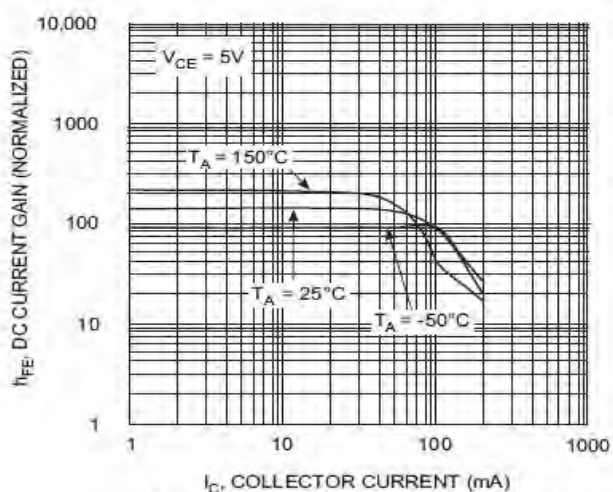
T_A : AMBIENT TEMPERATURE (°C)

Fig. 1, Max Power Dissipation vs Ambient Temperature



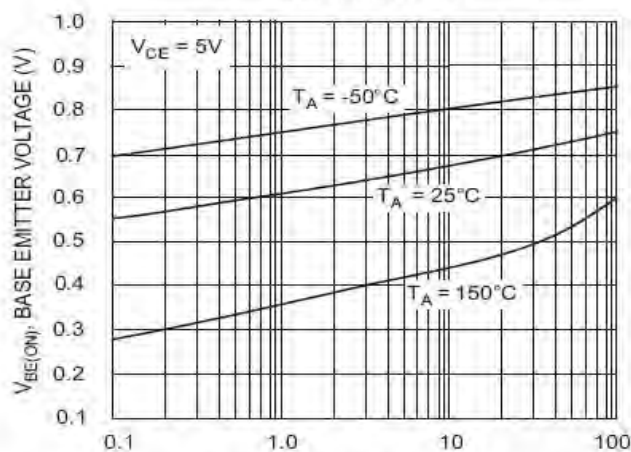
I_C : COLLECTOR CURRENT (mA)

Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current



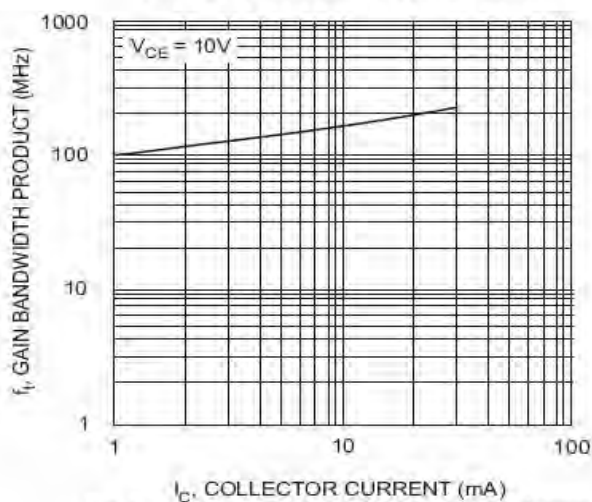
I_C : COLLECTOR CURRENT (mA)

Fig. 3, DC Current Gain vs. Collector Current



I_C : COLLECTOR CURRENT (mA)

Fig. 4, Base Emitter Voltage vs. Collector Current



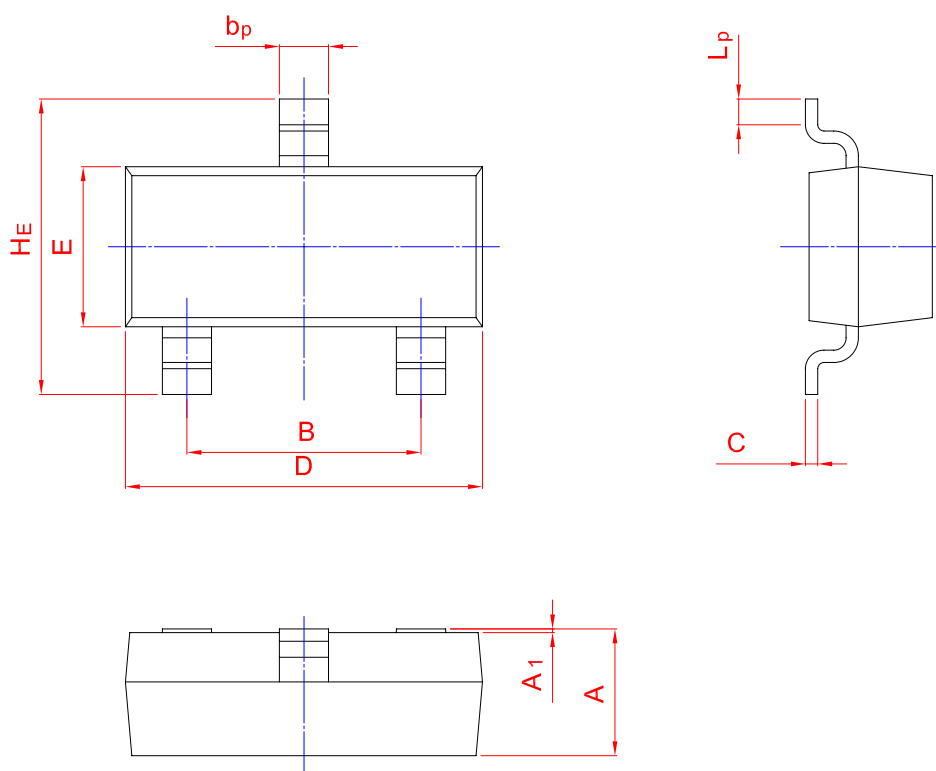
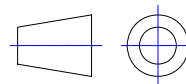
I_C : COLLECTOR CURRENT (mA)

Fig. 5, Gain Bandwidth Product vs Collector Current



PACKAGE OUTLINE

SOT-23



UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20