MMBTA05

TRANSISTOR(NPN)

Silicon Epitaxial Transistor

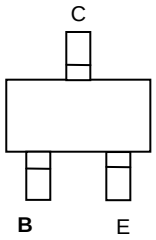
DESCRIPTION

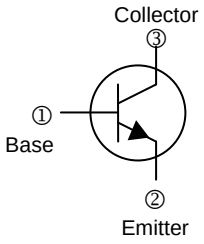
- The MMBTA05 is Amplifier Transistor

FEATURES

- Driver Transistor

MARKING : 1H





MAXIMUM RATINGS (at T_a = 25°C unless otherwise specified)

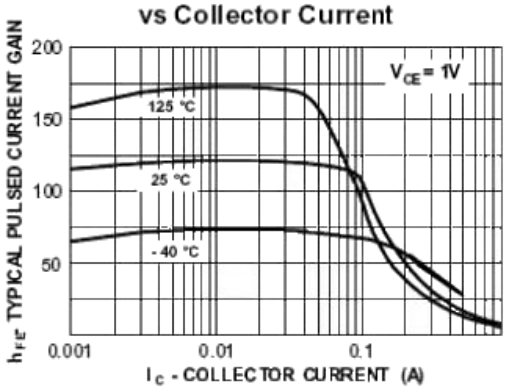
PARAMETER	SYMBOL	RATINGS	UNIT
Collector - Base Voltage	V_{CBO}	60	V
Collector - Emitter Voltage	V_{CEO}	60	V
Emitter - Base Voltage	V_{EBO}	4	V
Collector Current - Continuous	I_C	0.5	A
Collector Power Dissapation	P_C	300	mW
Junction, Storage Temperature	T_J, T_{STG}	150, -55~150	℃

ELECTRICAL CHARACTERISTICS (at T_a = 25°C unless otherwise specified)

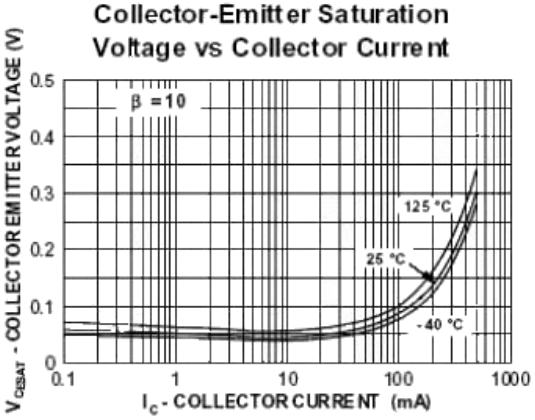
PARAMETER	TEST CONDITIONS	SYMBOL	MIN.	MAX.	UNIT
Collector-Base Breakdown Voltage	I_C =100μA, I_E =0	$V_{(BR)CBO}$	60		V
Collector-Emitter Breakdown Voltage	I_C =1mA, I_B =0	$V_{(BR)CEO}$	60		V
Emitter-Base Breakdown Voltage	I_E =100μA, I_C =0	$V_{(BR)EBO}$	4		V
Collector Cut-Off Current	V_{CB} =60V, I_E =0	I_{CBO}		0.1	μA
Collector Cut-Off Current	V_{CE} =60V, I_B =0	I_{CEO}		0.1	μA
Collector Cut-Off Current	V_{EB} =3V, I_C =0	I_{EBO}		0.1	μA
DC Current Gain	V_{CE} =1V, I_C =10mA	h_{FE1}	100	400	
	V_{CE} =1V, I_C =100mA	h_{FE2}	100		
Collector-Emitter Saturation Voltage	I_C =100mA, I_B =10mA	$V_{CE(sat)}$		0.25	V
Base-Emitter Voltage	V_{CE} =1V, I_C=100mA	V_{BE}		1.2	V
Transition Frequency	V_{CE} =2V, I_C=10mA,f=100MHz	F_T	100		MHz

CHARACTERISTIC CURVES

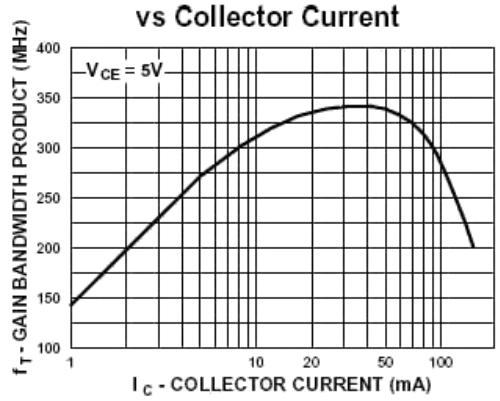
Typical Pulsed Current Gain vs Collector Current



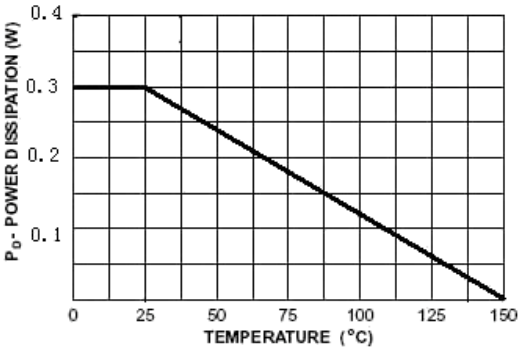
Collector-Emitter Saturation Voltage vs Collector Current



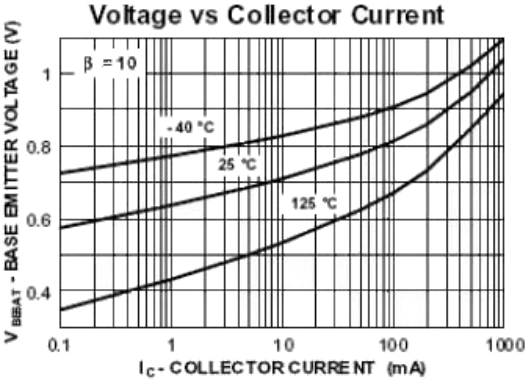
Gain Bandwidth Product vs Collector Current



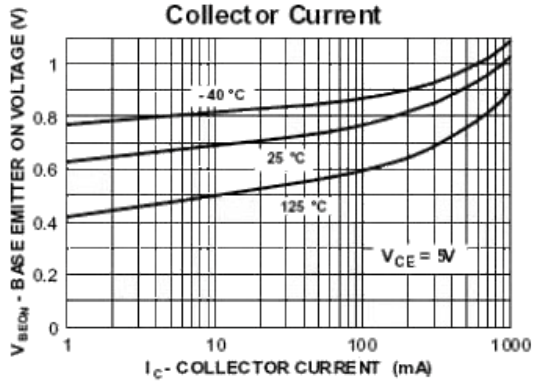
Power Dissipation vs Ambient Temperature



Base-Emitter Saturation Voltage vs Collector Current

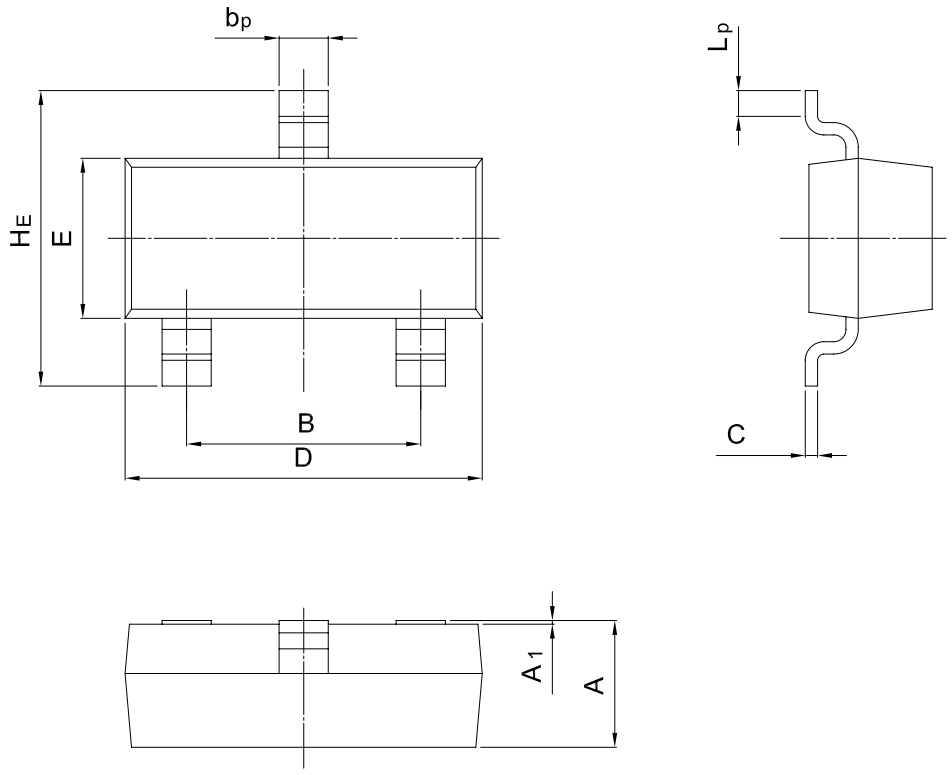


Base Emitter ON Voltage vs Collector Current



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads **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