

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

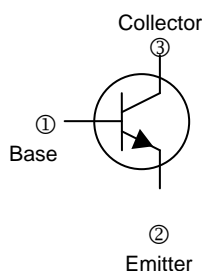
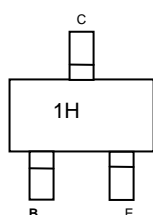
DESCRIPTION

- The MMBTA05 is Amplifier Transistor

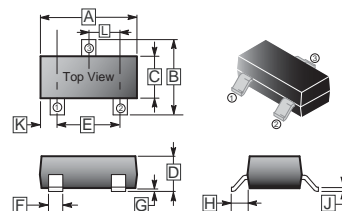
FEATURES

- Driver Transistor

MARKING



SOT-23



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.70	3.04	G	-	0.18
B	2.10	2.80	H	0.40	0.60
C	1.20	1.60	J	0.08	0.20
D	0.89	1.40	K	0.6	REF.
E	1.78	2.04	L	0.85	1.15
F	0.30	0.50			

MAXIMUM RATINGS (at $T_a = 25^\circ\text{C}$ unless otherwise specified)

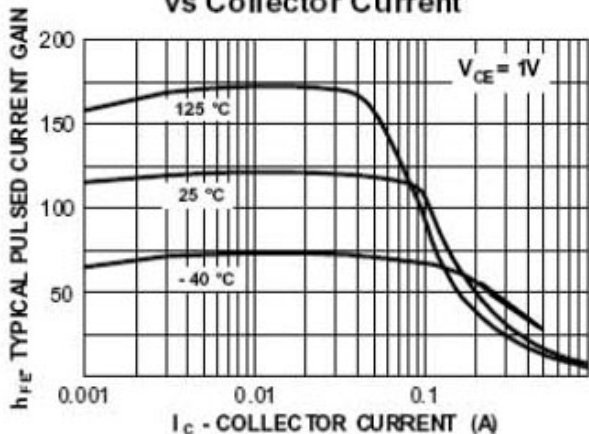
PARAMETER	SYMBOL	RATINGS	UNIT
Collector - Base Voltage	V_{CBO}	60	V
Collector - Emitter Voltage	V_{CEO}	60	V
Emitter - Base Voltage	V_{EBO}	4	V
Collector Current - Continuous	I_C	0.5	A
Collector Power Dissipation	P_C	300	mW
Junction, Storage Temperature	T_J, T_{STG}	150, -55~150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (at $T_a = 25^\circ\text{C}$ unless otherwise specified)

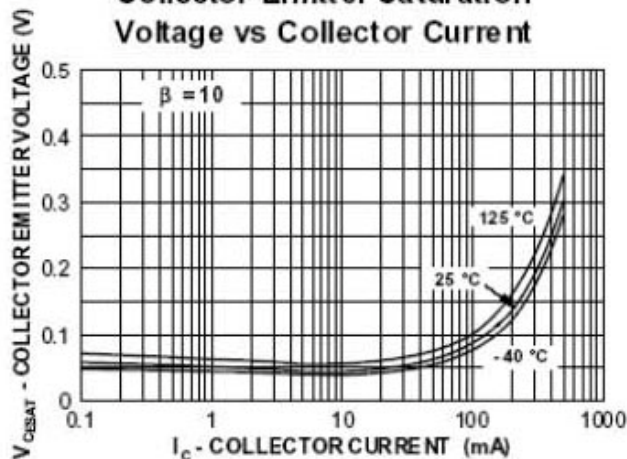
PARAMETER	TEST CONDITIONS	SYMBOL	MIN.	MAX.	UNIT
Collector-Base Breakdown Voltage	$I_C = 100\mu\text{A}, I_E = 0$	$V_{(BR)CBO}$	60		V
Collector-Emitter Breakdown Voltage	$I_C = 1\text{mA}, I_B = 0$	$V_{(BR)CEO}$	60		V
Emitter-Base Breakdown Voltage	$I_E = 100\mu\text{A}, I_C = 0$	$V_{(BR)EBO}$	4		V
Collector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

CHARACTERISTIC CURVES

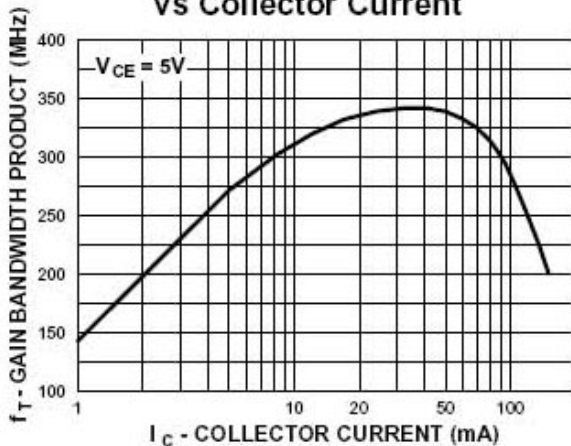
Typical Pulsed Current Gain vs Collector Current



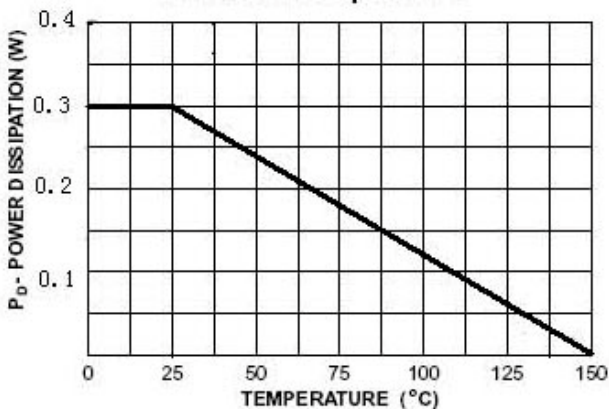
Collector-Emitter Saturation Voltage vs Collector Current



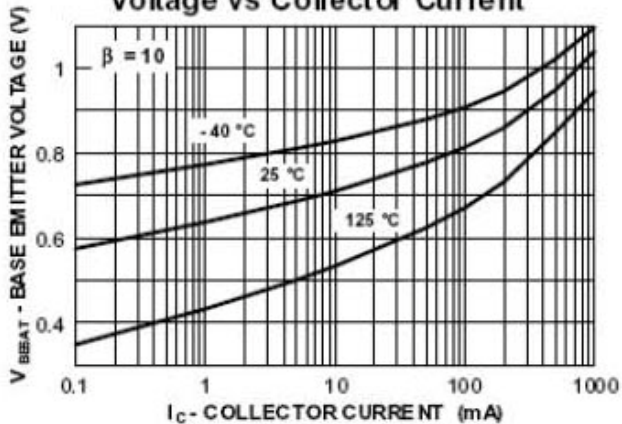
Gain Bandwidth Product vs Collector Current



Power Dissipation vs Ambient Temperature



Base-Emitter Saturation Voltage vs Collector Current



Base Emitter ON Voltage vs Collector Current

