



**SOT-23 Plastic-Encapsulate Transistors**

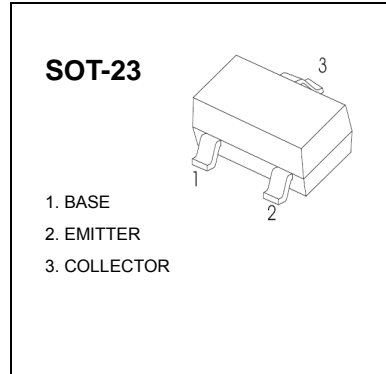
**MMBTA05** TRANSISTOR (NPN)

**FEATURES**

Driver transistor

**MARKING :1H**

**MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)**



Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	60	V
V <sub>CEO</sub>	Collector-Emitter Voltage	60	V
V <sub>EBO</sub>	Emitter-Base Voltage	4	V
I <sub>C</sub>	Collector Current -Continuous	0.5	A
P <sub>C</sub>	Collector Power Dissipation	300	mW
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55-150	°C

**ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)**

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = 100μA, I <sub>E</sub> =0	60			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = 1mA, I <sub>B</sub> =0	60			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =100μA, I <sub>C</sub> =0	4			V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =60V, I <sub>E</sub> =0			0.1	μA
Collector cut-off current	I <sub>CEO</sub>	V <sub>CE</sub> =60V, I <sub>B</sub> =0			0.1	μA
Collector cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =3V, I <sub>C</sub> =0			0.1	μA
DC current gain	h <sub>FE1</sub>	V <sub>CE</sub> =1V, I <sub>C</sub> = 10mA	100		400	
	h <sub>FE2</sub>	V <sub>CE</sub> =1V, I <sub>C</sub> = 100mA	100			
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =100mA, I <sub>B</sub> =10mA			0.25	V
Base-emitter voltage	V <sub>BE</sub>	V <sub>CE</sub> =1V, I <sub>C</sub> = 100mA			1.2	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 2V, I <sub>C</sub> =10mA f=100MHZ	100			MHz

# Typical Characteristics

# MMBTA05

