

# 深圳市晶泰源电子有限公司

**MMBT4401**

TRANSISTOR ( NPN)

## FEATURES

Switching transistor

MARKING: MMBT4401=2X

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

Symbol	Parameter	Value	Units
V <sub>CB0</sub>	Collector-Base Voltage	60	V
V <sub>CEO</sub>	Collector-Emitter Voltage	40	V
V <sub>EBO</sub>	Emitter-Base Voltage	6	V
I <sub>C</sub>	Collector Current -Continuous	600	mA
P <sub>C</sub>	Collector Power dissipation	0.3	W
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55to +150	°C
R <sub>θJA</sub>	Thermal Resistance, junction to Ambient	357	°C/mW

**SOT-23**



1. BASE
2. EMITTER
3. COLLECTOR

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

Parameter	Symbol	Test conditions	MIN	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	40		V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = 100μA, I <sub>C</sub> =0	6		V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =50 V, I <sub>E</sub> =0		0.1	μA
Collector cut-off current	I <sub>CEO</sub>	V <sub>CE</sub> =30 V, I <sub>B</sub> =0		0.1	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0		0.1	μA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> =1V, I <sub>C</sub> =150mA	100	300	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =150mA, I <sub>B</sub> =15mA		0.4	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 150mA, I <sub>B</sub> =15mA		0.95	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 10V, I <sub>C</sub> = 20mA f = 100MHz	250		MHz