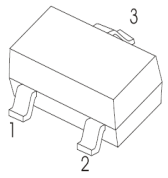
SHENZHEN HAOCHANG SEMICONDUCTOR CO.,LTD.

SOT-23 Plastic-Encapsulate Transistors

MMBTA44 TRANSISTOR (NPN)

SOT－23



1. BASE
2. EMITTER
3. COLLECTOR

FEATURES

- High Collector-Emitter Voltage
- Complement to MMBTA94

MARKING: 3D

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	500	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	100	mA
P_C	Collector Power Dissipation	350	mW
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	357	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55～+150	℃

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA, I_E=0	500			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$*	I_C=1mA, I_B=0	400			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10μA, I_C=0	6			V
Collector cut-off current	I_{CBO}	V_{CB}=400V, I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=4V, I_C=0			0.1	μA
DC current gain	$h_{FE(1)}$ *	V_{CE}=10V, I_C=1mA	40			
	$h_{FE(2)}$ *	V_{CE}=10V, I_C=10mA	50		200	
	$h_{FE(3)}$ *	V_{CE}=10V, I_C=50mA	45			
	$h_{FE(4)}$ *	V_{CE}=10V, I_C=100mA	40			
Collector-emitter saturation voltage	$V_{CE(sat)1}$*	I_C=1mA, I_B=0.1mA			0.4	V
	$V_{CE(sat)2}$*	I_C=10mA, I_B=1mA			0.5	V
	$V_{CE(sat)3}$*	I_C=50mA, I_B=5mA			0.75	V
Base-emitter saturation voltage	$V_{BE(sat)}$*	I_C=10mA, I_B=1mA			0.75	V
Collector output capacitance	C_{ob}	V_{CB}=20V, I_E=0, f=1MHz			7	pF
Emitter input capacitance	C_{ib}	V_{EB}=0.5V, I_C=0, f=1MHz			130	pF

*Pulse test: pulse width ≤300μs, duty cycle≤ 2.0%.