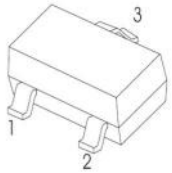
迈拓电子
MAITUO ELECTRONIC

MMBT591 Plastic-Encapsulate Transistors

TRANSISTOR (PNP)



1. BASE
2. EMITTER
3. COLLECTOR

FEATURES

Low equivalent on-resistance

Marking :591

SOT-23

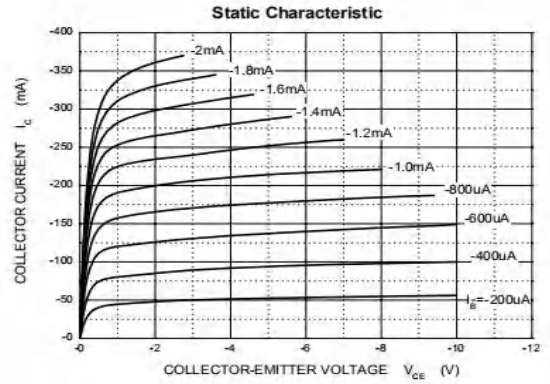
MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

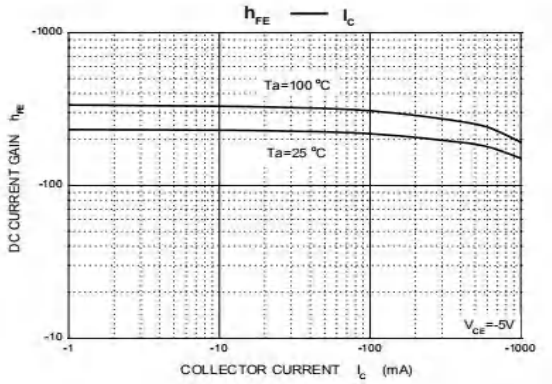
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-80	V
V_{CEO}	Collector-Emitter Voltage	-60	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-1	A
I_{CM}	Peak Pulse Current	-2	A
P_C	Collector Power Dissipation	250	mW
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	500	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55～+150	℃

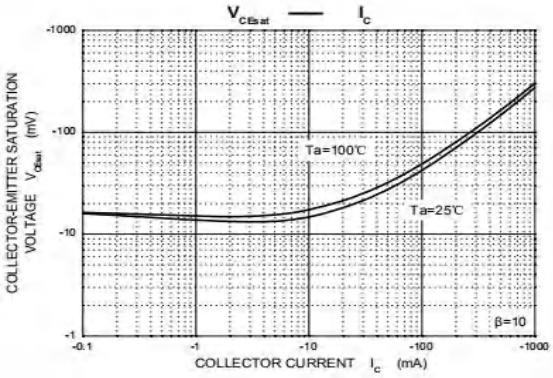
ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

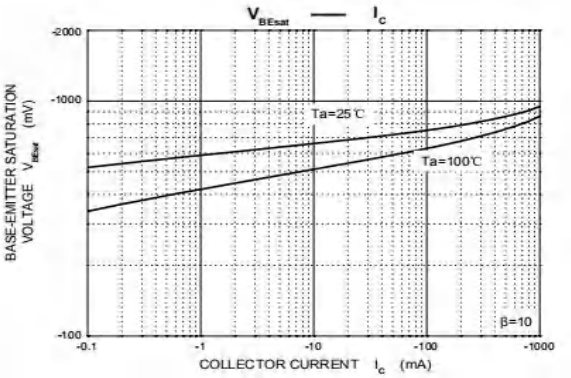
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-100μA, I_E=0	-80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=-10mA, I_B=0	-60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-100μA, I_C=0	-5			V
Collector cut-off current	I_{CBO}	V_{CB}=-60V, 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}=-5V, I_C=-1mA	100			
	$h_{FE(2)}$	V_{CE}=-5V, I_C=-500mA	100		300	
	$h_{FE(3)}$	V_{CE}=-5V, I_C=-1A	80			
	$h_{FE(4)}$	V_{CE}=-5V, I_C=-2A	15			
Collector-emitter saturation voltage	$V_{CE(sat)1}$	I_C=-500mA, I_B=-50mA			-0.3	V
	$V_{CE(sat)2}$	I_C=-1A, I_B=-100mA			-0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=-1A, I_B=-100mA			-1.2	V
Base-emitter voltage	V_{BE}	V_{CE}=-5V, I_C=-1A			-1	V
Transition frequency	f_T	V_{CE}=-10V,I_C=-50mA,,f=100MHz	150			MHz
Collector output capacitance	C_{ob}	V_{CB}=-10V,f=1MHz			10	pF

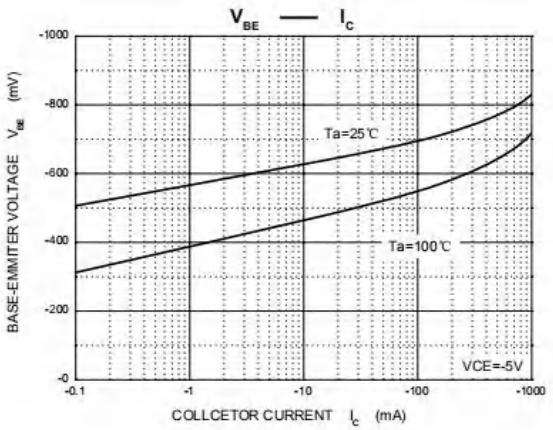
Typical Characteristics

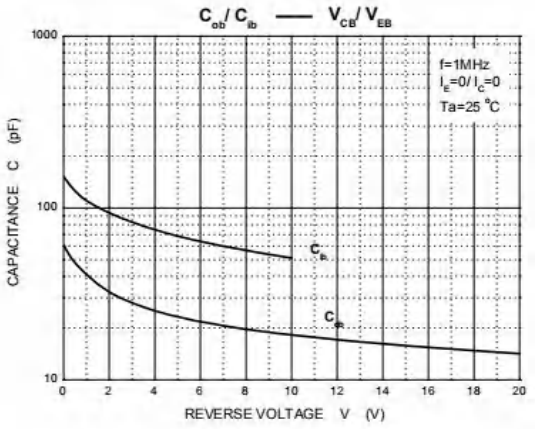


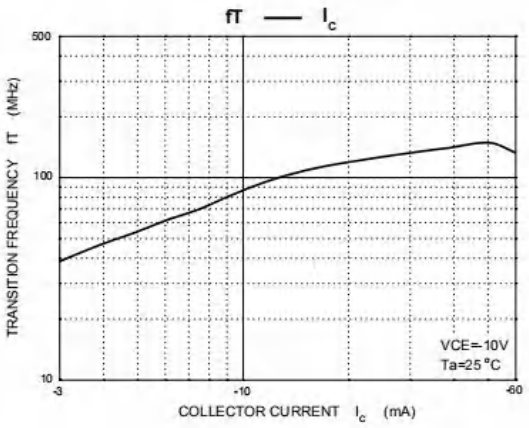


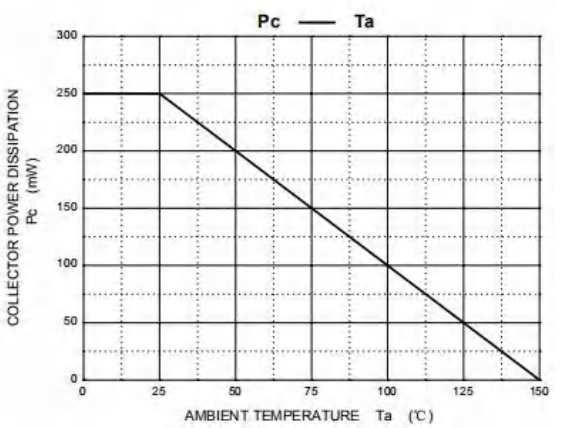












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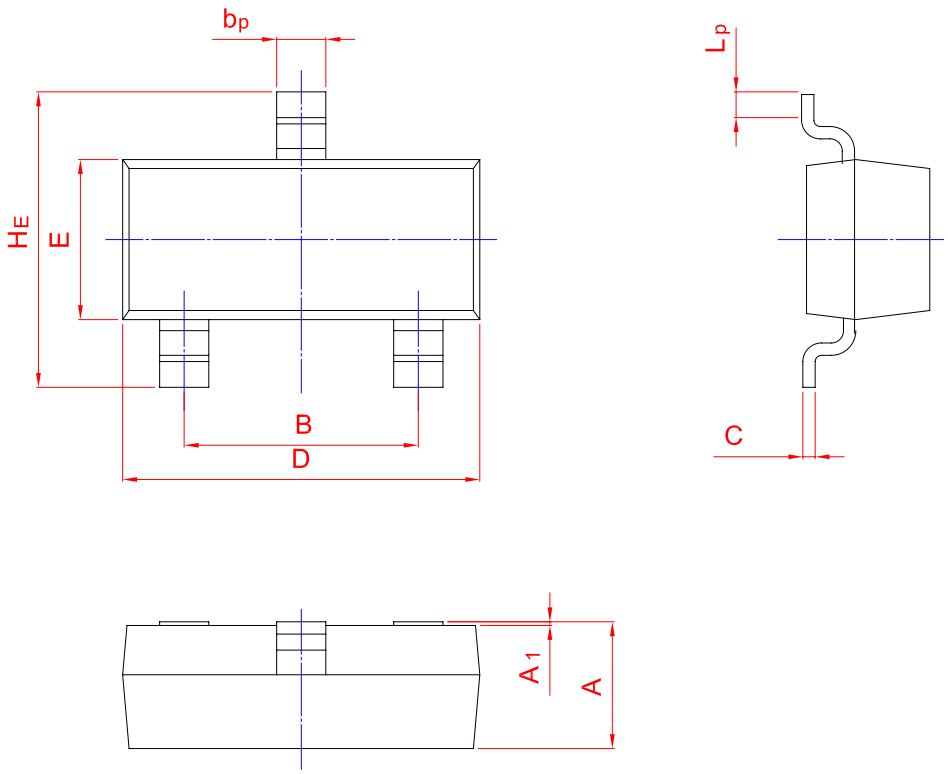
PACKAGE OUTLINE

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