

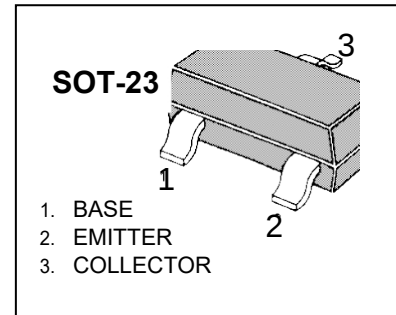
SOT-23 Plastic-Encapsulate Transistors

FMMT591 TRANSISTOR (PNP)

FEATURES

Low equivalent on-resistance

Marking :591



MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

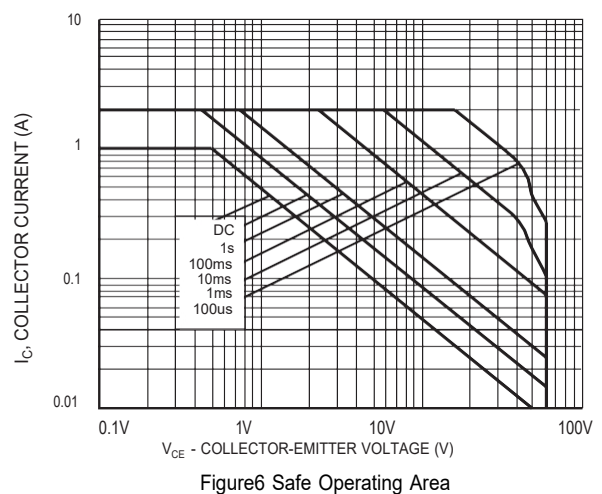
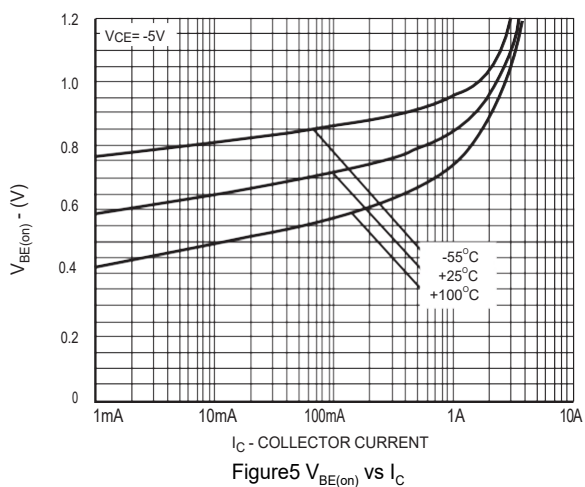
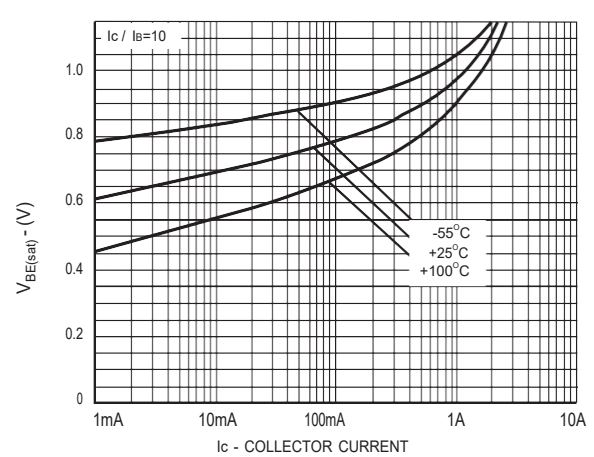
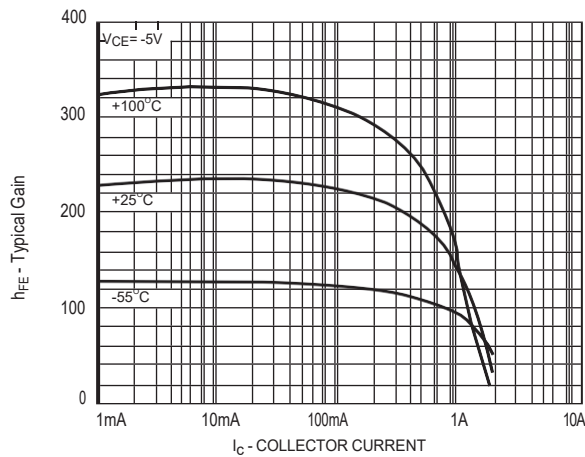
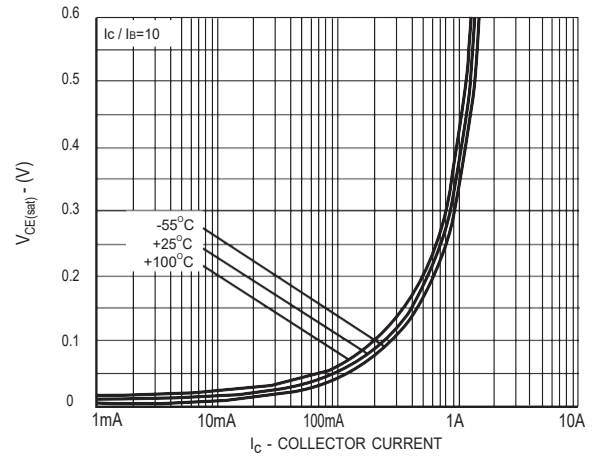
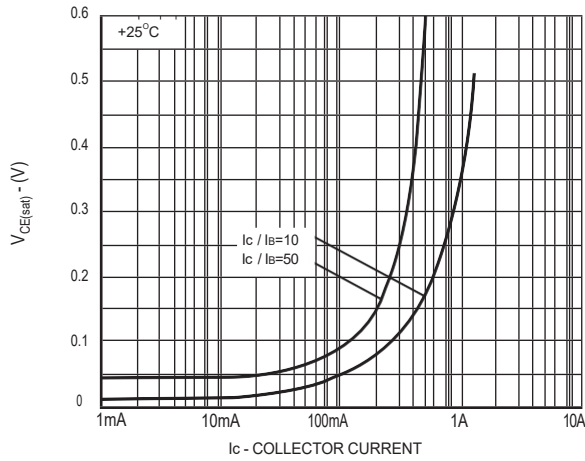
Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-80	V
V_{CEO}	Collector-Emitter Voltage	-60	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-1	A
P_C	Collector Power Dissipation	500	mW
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55-150	$^{\circ}\text{C}$

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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-100\mu\text{A}$, $I_E=0$	-80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}^1$	$I_C=-10\text{mA}$, $I_B=0$	-60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-100\mu\text{A}$, $I_C=0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB}=-60\text{V}$, $I_E=0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-4\text{V}$, $I_C=0$			-0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=-5\text{V}$, $I_C=-1\text{mA}$	100			
	$h_{FE(2)}^1$	$V_{CE}=-5\text{V}$, $I_C=-500\text{mA}$	100		300	
	$h_{FE(3)}^1$	$V_{CE}=-5\text{V}$, $I_C=-1\text{A}$	80			
	$h_{FE(4)}^1$	$V_{CE}=-5\text{V}$, $I_C=-2\text{A}$	15			
Collector-emitter saturation voltage	$V_{CE(sat)1}^1$	$I_C=-500\text{mA}$, $I_B=-50\text{mA}$			-0.3	V
	$V_{CE(sat)2}^1$	$I_C=-1\text{A}$, $I_B=-100\text{mA}$			-0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}^1$	$I_C=-1\text{A}$, $I_B=-100\text{mA}$			-1.2	V
Base-emitter voltage	V_{BE}^1	$V_{CE}=-5\text{V}$, $I_C=-1\text{A}$			-1	V
Transition frequency	f_T	$V_{CE}=-10\text{V}$, $I_C=-50\text{mA}$, $f=100\text{MHz}$	150			MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10\text{V}$, $f=1\text{MHz}$			10	pF

¹Measured under pulsed conditions, Pulse width=300 μs , Duty cycle $\leq 2\%$.

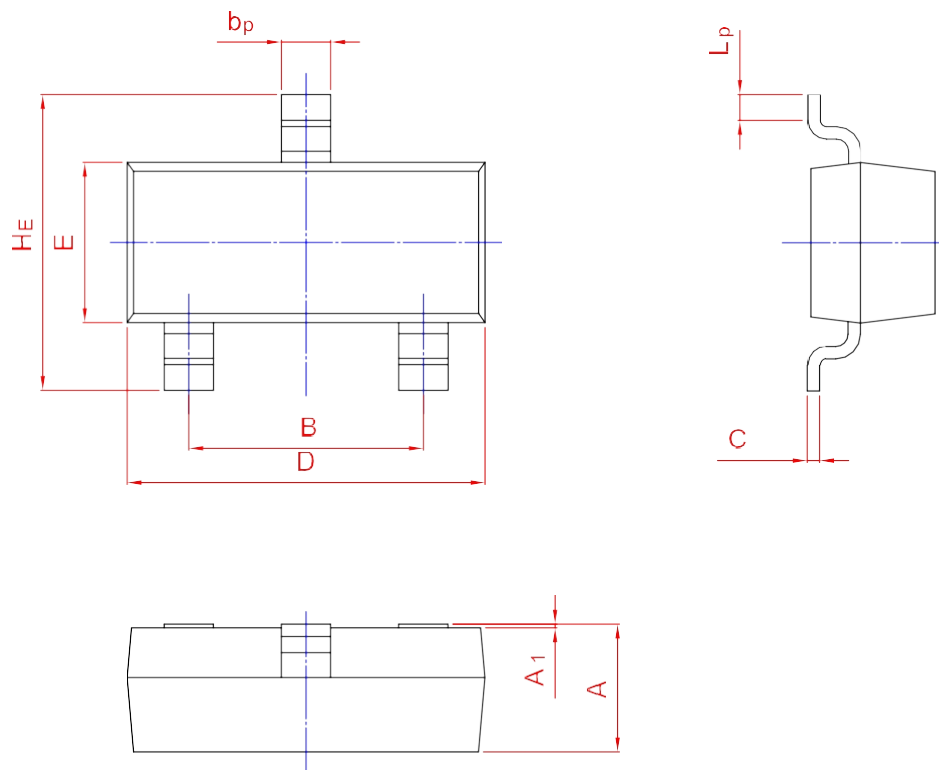
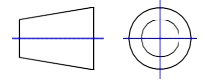
Typical Characteristics



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	b _p	C	D	E	H _E	A ₁	L _p
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