FMMT591 TRANSISTOR (PNP)

1.BASE
2.COLLECTOR
3.EMITTER

SOT-23-3

FEATURES

Low equivalent on-resistance

Marking :591

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

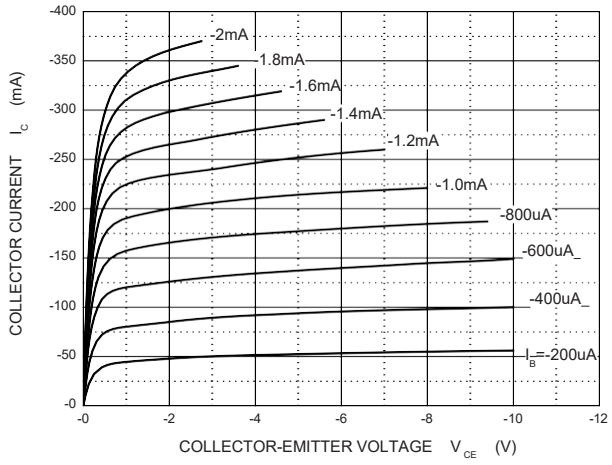
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-80	V
V_{CEO}	Collector-Emitter Voltage	-60	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-1	A
I_{CM}	Peak Pulse Current	-2	A
P_C	Collector Power Dissipation	250	mW
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	500	℃/W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

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

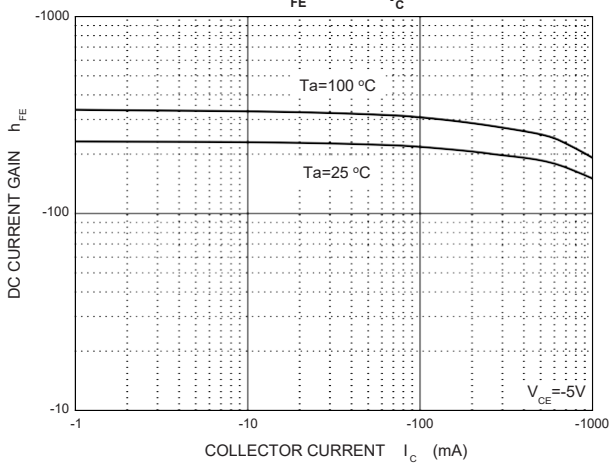
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-100μA, I_E=0	-80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$[1]	I_C=-10mA, I_B=0	-60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-100μA, I_C=0	-5			V
Collector cut-off current	I_{CBO}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

[1]Measured under pulsed conditions, Pulse width=300μs, Duty cycle≤2%.

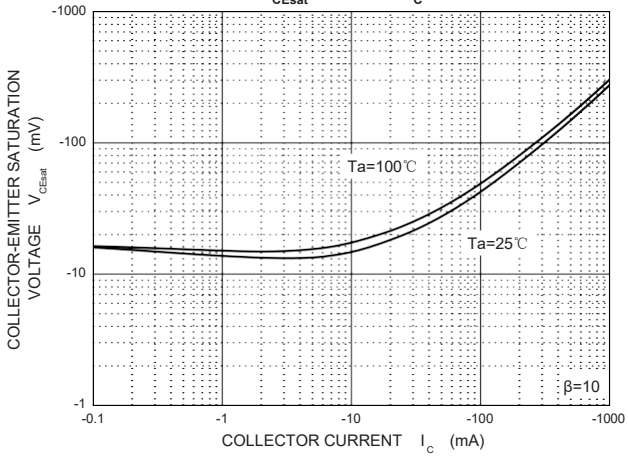
Static Characteristic



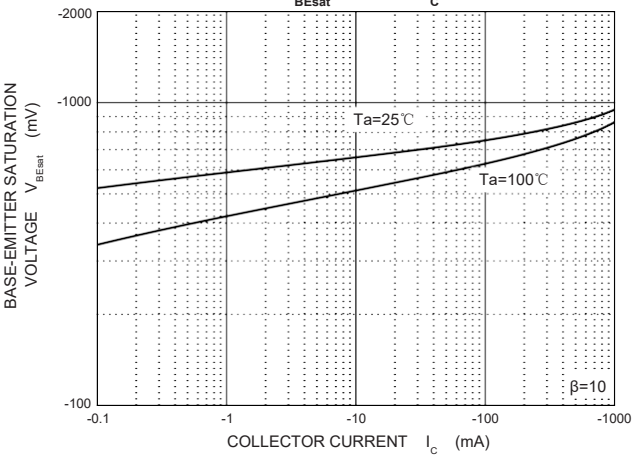
h_{FE} —— I_C



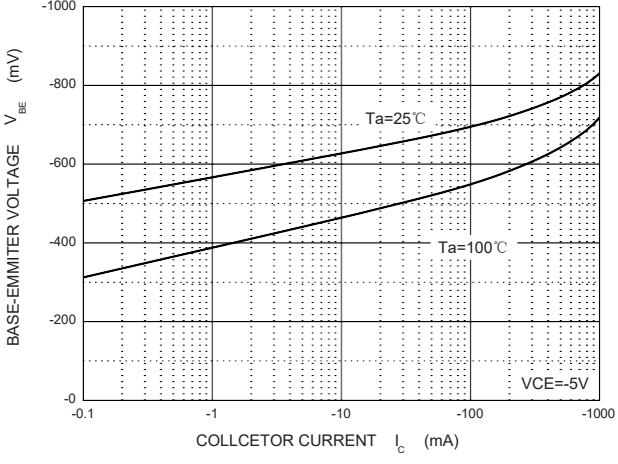
V_{CEsat} —— I_C



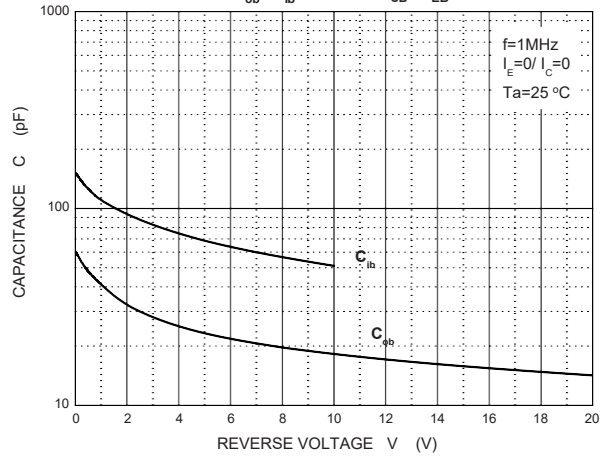
V_{BEsat} —— I_C



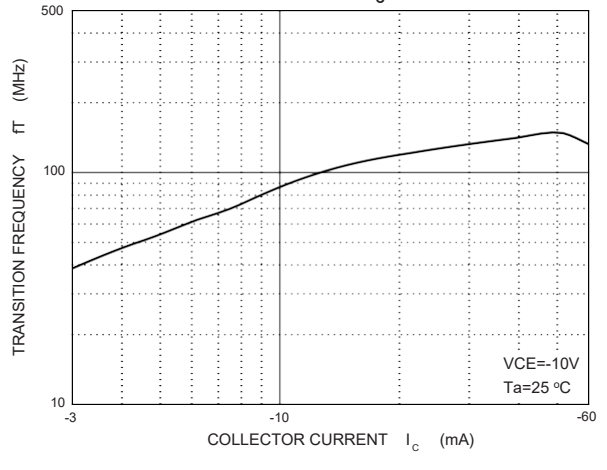
V_{BE} —— I_C



C_{ob} / C_{ib} —— V_{CB} / V_{EB}



fT —— I_C



Pc —— Ta