



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

FMMT591

TECHNICAL SPECIFICATIONS OF PNP EPITAXIAL PLANAR TRANSISTOR

Description

Low equivalent on-resistance

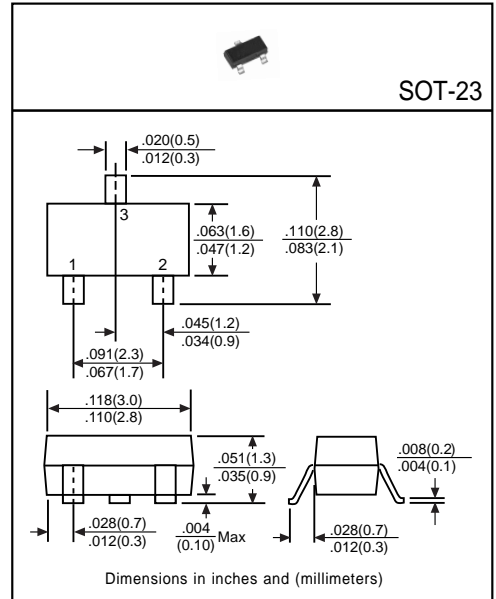
Pinning

- 1 = Base
- 2 = Emitter
- 3 = Collector

Marking: 591

Absolute Maximum Ratings(T_A=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V _{CB0}	-80	V
Collector-Emitter Voltage	V _{CE0}	-60	V
Emitter-Base Voltage	V _{EB0}	-6	V
Collector Current	I _C	-1	A
Peak Pulse Current	I _{CM}	-2	A
Total Power Dissipation	P _D	250	mW
Junction Temperature	T _J	+150	°C
Storage Temperature	T _{STG}	-55 to +150	°C



Electrical Characteristics

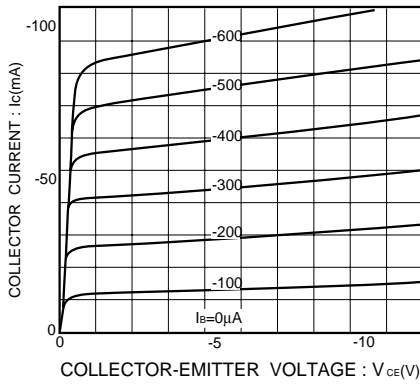
(Ratings at 25°C ambient temperature unless otherwise specified)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Collector-Base Breakdown Voltage	BV _{CB0}	-80	-	-	V	I _C =-100μA
Collector-Emitter Breakdown Voltage	BV _{CE0}	-60	-	-	V	I _C =-10mA
Emitter-Base Breakdown Voltage	BV _{EB0}	-5	-	-	V	I _E =-100μA
Collector Cutoff Current	I _{CBO}	-	-	-100	nA	V _{CB} =-60V, I _E =0V
Collector-Emitter Saturation Voltage ⁽¹⁾	V _{CE(sat)1}	-	-	-0.25	V	I _C =-500mA, I _B =-50mA
	V _{CE(sat)2}	-	-	-0.5	V	I _C =-1000mA, I _B =-100mA
Base-Emitter Saturation Voltage ⁽¹⁾	V _{BE(sat)1}	-	-	-1.1	V	I _C =-1000mA, I _B =-100mA
Base-Emitter Voltage ⁽¹⁾	V _{BE}	-	-	-1	V	V _{CE} =-5V, I _E =-1A
DC Current Gain ⁽¹⁾	h _{FE1}	100	-	-	-	I _C =-1mA, V _{CE} =-5V
	h _{FE2}	100	-	300	-	I _C =-500mA, V _{CE} =-5V
	h _{FE3}	80	-	-	-	I _C =-1A, V _{CE} =-5V
	h _{FE4}	30	-	-	-	I _C =-2A, V _{CE} =-5V
Transition Frequency	f _T	150	-	-	MHz	I _C =-20mA, V _{CE} =-10V, f=100MHz
Output Capacitance	C _{ob}	-	-	10	pF	V _{CB} =-5V, f=1MHz

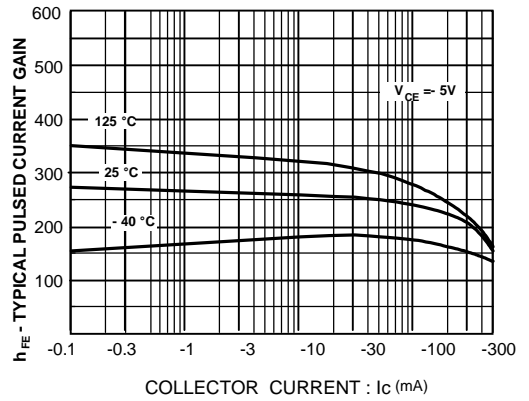
(1)Pulse Test: Pulse Width ≧ 380μs, Duty Cycle ≧ 2%

Electrical Characteristic Curves

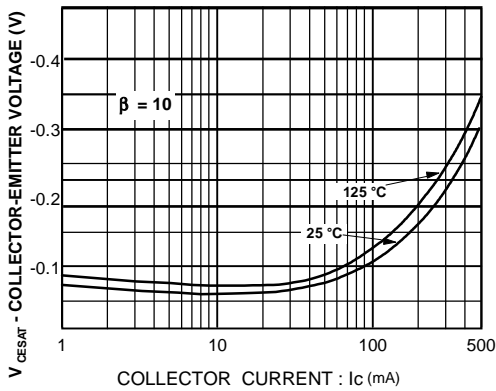
Typical Output Characteristics



DC Current Transfer Ratio vs. Collector Current



Collector Emitter Saturation vs. Collector Current



Gain bandwidth product vs. collector current

