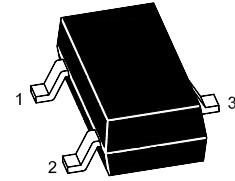




### Features

- Low equivalent on-resistance
- Be complementary with FMMT491

**SOT-23**  
**(TO-236)**



1.Base 2.Emitter 3.Collector

**Marking: 591**

### Absolute Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	80	V
Collector Emitter Voltage	$-V_{CEO}$	60	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	1	A
Peak Pulse Current	$-I_{CM}$	2	A
Power Dissipation	$P_D$	500	mW
Junction Temperature	$T_J$	150	°C
Storage Temperature Range	$T_{STG}$	-55 to 150	°C



### Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

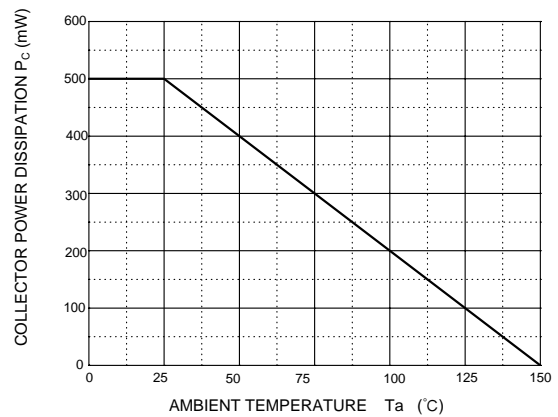
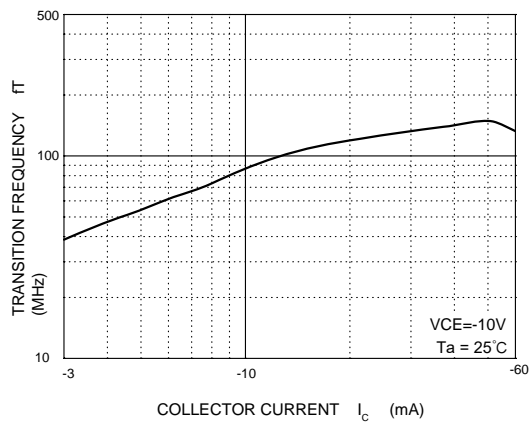
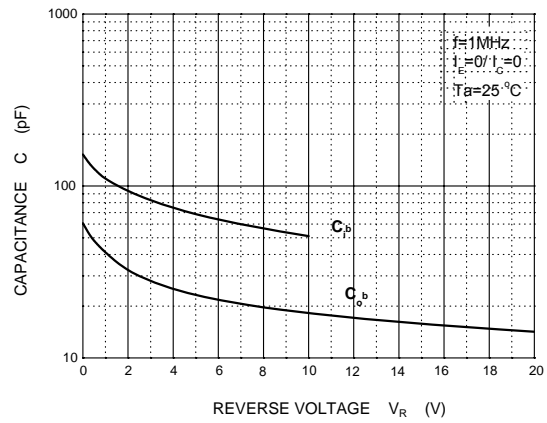
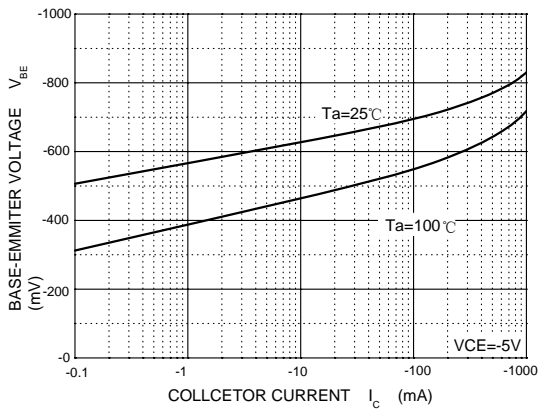
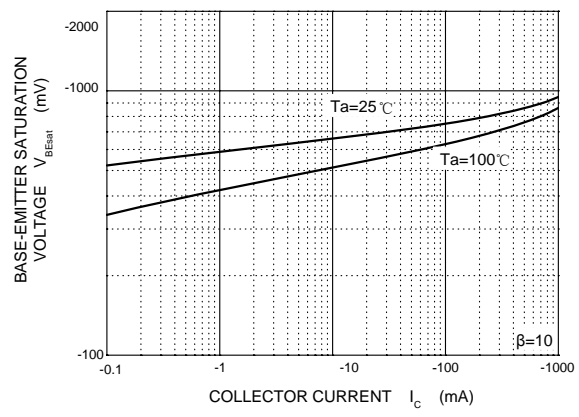
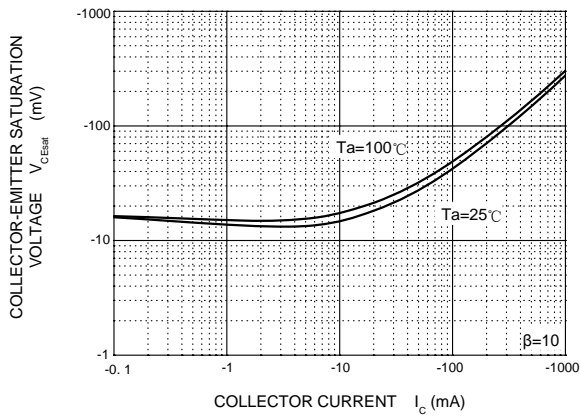
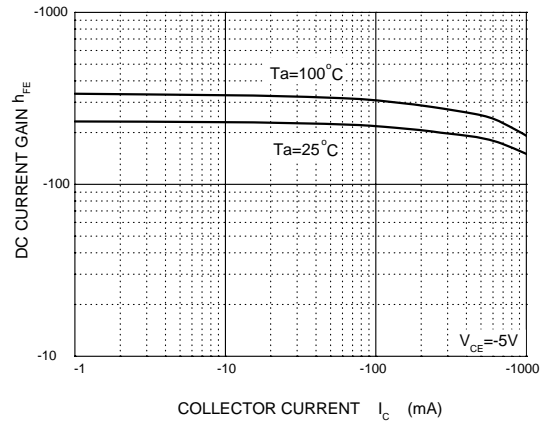
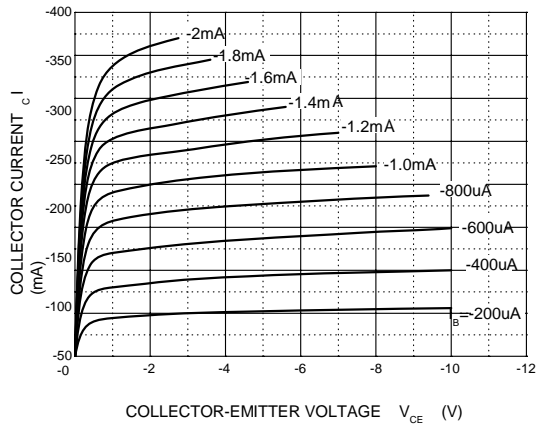
Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain <sup>note1</sup> at $-V_{CE} = 5\text{ V}$ , $-I_C = 1\text{ mA}$ at $-V_{CE} = 5\text{ V}$ , $-I_C = 500\text{ mA}$ at $-V_{CE} = 5\text{ V}$ , $-I_C = 1\text{ A}$ at $-V_{CE} = 5\text{ V}$ , $-I_C = 2\text{ A}$	$H_{FE}$	100 100 80 15	- - - -	- 300 - -	-
Collector Base Cutoff Current at $-V_{CB} = 60\text{ V}$	$-I_{CBO}$	-	-	100	nA
Emitter Base Cutoff Current at $-V_{EB} = 5.6\text{ V}$	$-I_{EBO}$	-	-	100	nA
Collector Base Breakdown Voltage at $-I_C = 100\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	80	-	-	V
Collector Emitter Breakdown Voltage at $-I_C = 10\text{ mA}$	$-V_{(BR)CEO}$	60	-	-	V
Emitter Base Breakdown Voltage at $-I_E = 100\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	5	-	-	V
Collector Emitter Saturation Voltage <sup>note1</sup> at $-I_C = 500\text{ mA}$ , $-I_B = 50\text{ mA}$ at $-I_C = 1\text{ A}$ , $-I_B = 100\text{ mA}$	$-V_{CE(sat)}$	-	-	300 600	mV
Base Emitter Saturation Voltage <sup>note1</sup> at $-I_C = 1\text{ A}$ , $-I_B = 100\text{ mA}$	$-V_{BE(sat)}$	-	-	1.2	V
Base Emitter Voltage <sup>note1</sup> at $-V_{CE} = 5\text{ V}$ , $-I_C = 1\text{ A}$	$-V_{BE(on)}$	-	-	1	V
Transition Frequency at $-V_{CE} = 10\text{ V}$ , $-I_C = 50\text{ mA}$ , $f = 100\text{ MHz}$	$F_T$	150	-	-	MHz
Collector Output Capacitance at $-V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$	$C_{ob}$	-	-	10	pF

Note1: Measured under pulsed condition, Pulse width  $\leq 300\mu\text{s}$ , Duty cycle 2%.



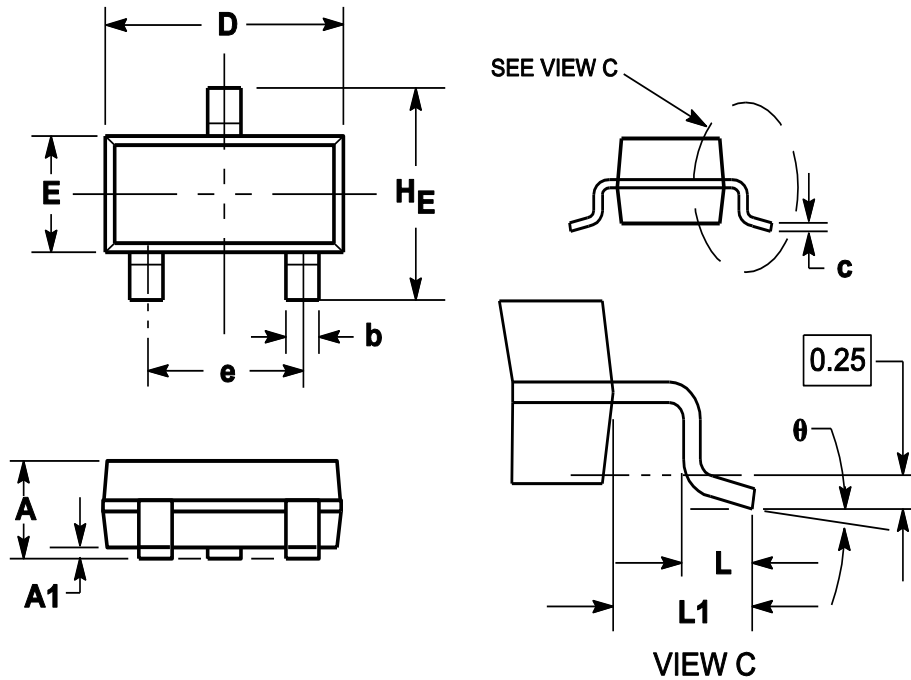
# FM591

## PNP Transistor





### Package Outline(SOT-23)



Symbol	Dimensions in millimeter		
	Min.	Typ.	Max.
A	0.900	1.025	1.150
A1	0.000	0.050	0.100
b	0.300	0.400	0.500
c	0.080	0.115	0.150
D	2.800	2.900	3.000
E	1.200	1.300	1.400
HE	2.250	2.400	2.550
e	1.800	1.900	2.000
L1	0.550REF		
L	0.300		0.500
$\theta$	0°		8°

### Ordering Information

Device	Package	Reel Dimension (inch)	Shipping
FMMT591	SOT-23	7	3,000

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