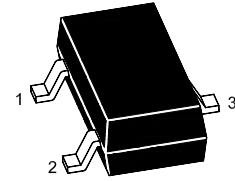


## NPN Silicon Epitaxial Planar Transistor

### Features

- Low equivalent on-resistance
- Be complementary with FMMT591

**SOT-23**

1.Base 2.Emitter 3.Collector

### Absolute Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

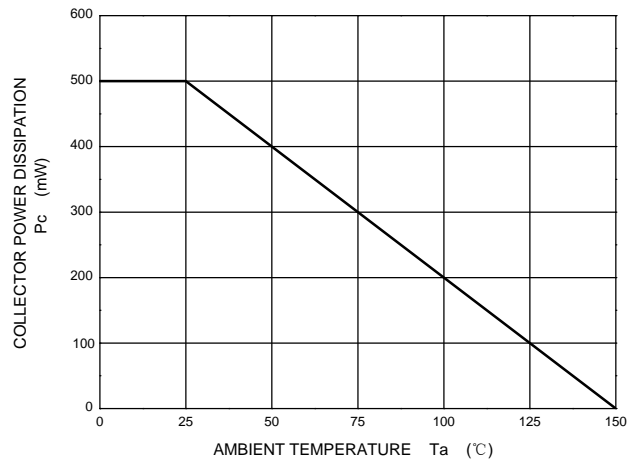
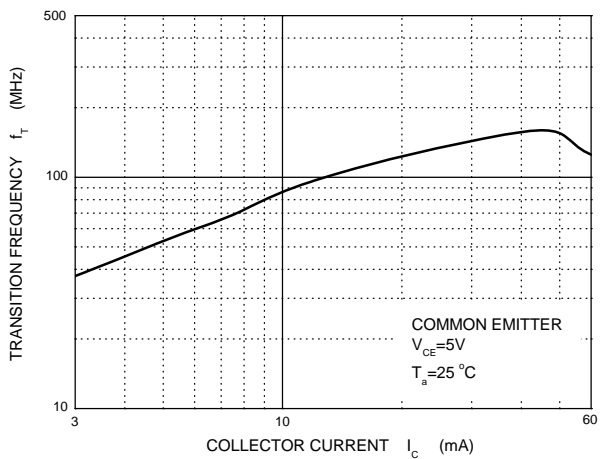
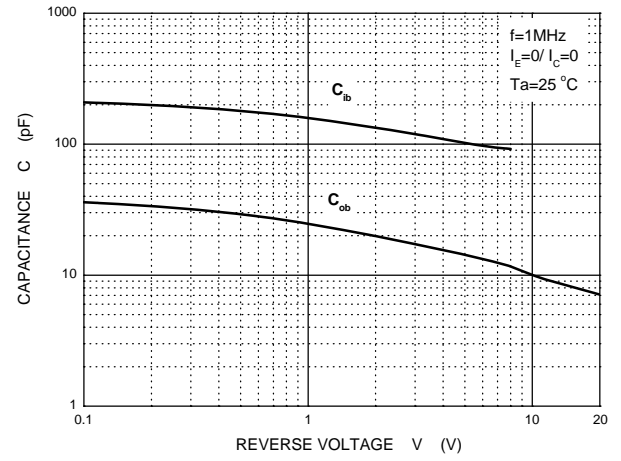
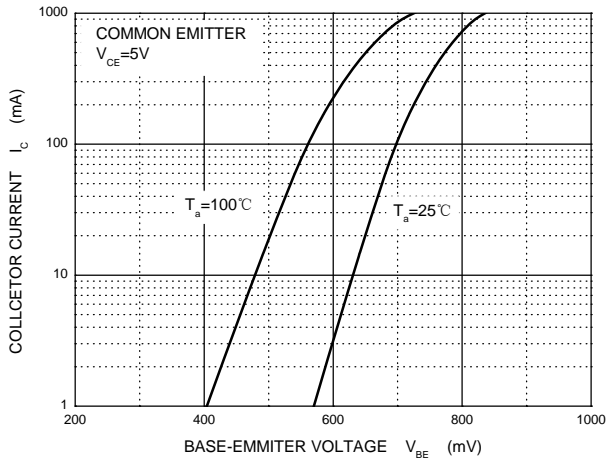
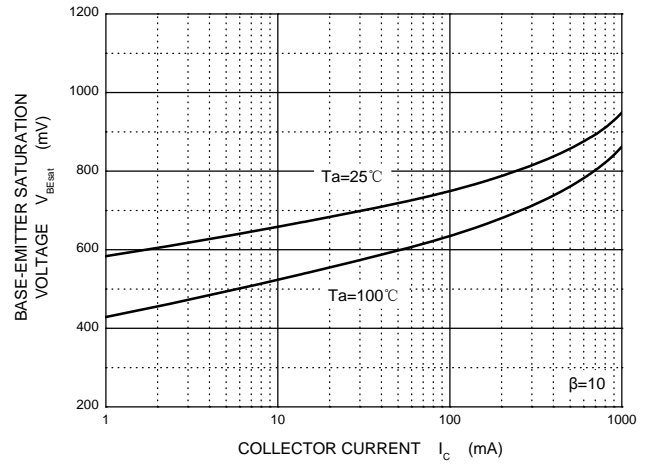
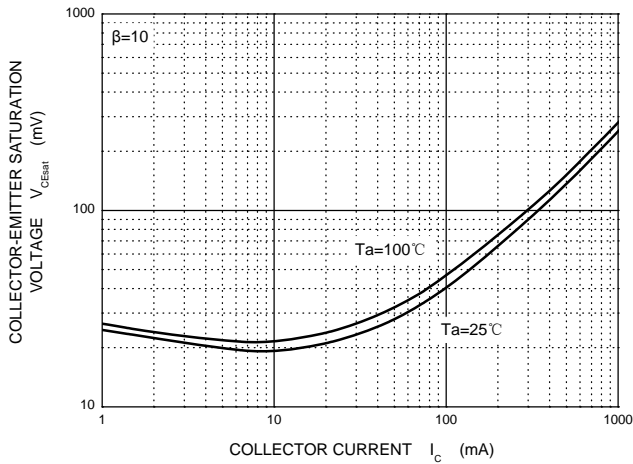
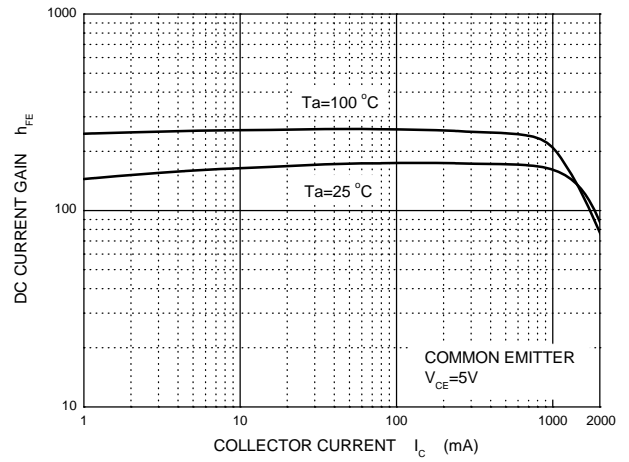
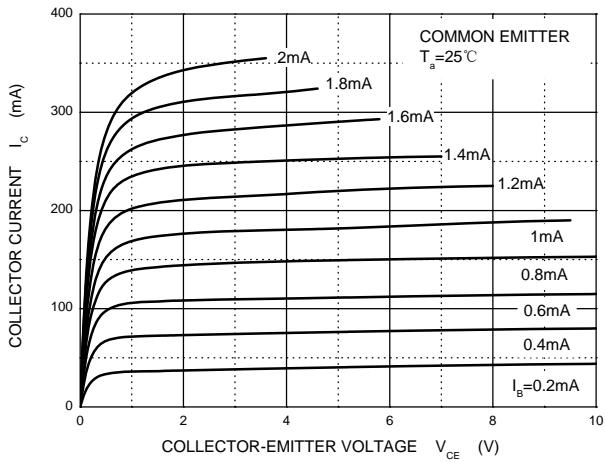
Parameter	Symbol	Value	Unit
Collector Base Voltage	$V_{CB0}$	80	V
Collector Emitter Voltage	$V_{CE0}$	60	V
Emitter Base Voltage	$V_{EB0}$	5	V
Collector Current	$I_C$	1	A
Peak Pulse Current	$I_{CM}$	2	A
Power Dissipation	$P_D$	500	mW
Junction Temperature	$T_J$	150	°C
Storage Temperature Range	$T_{STG}$	-55 to 150	°C

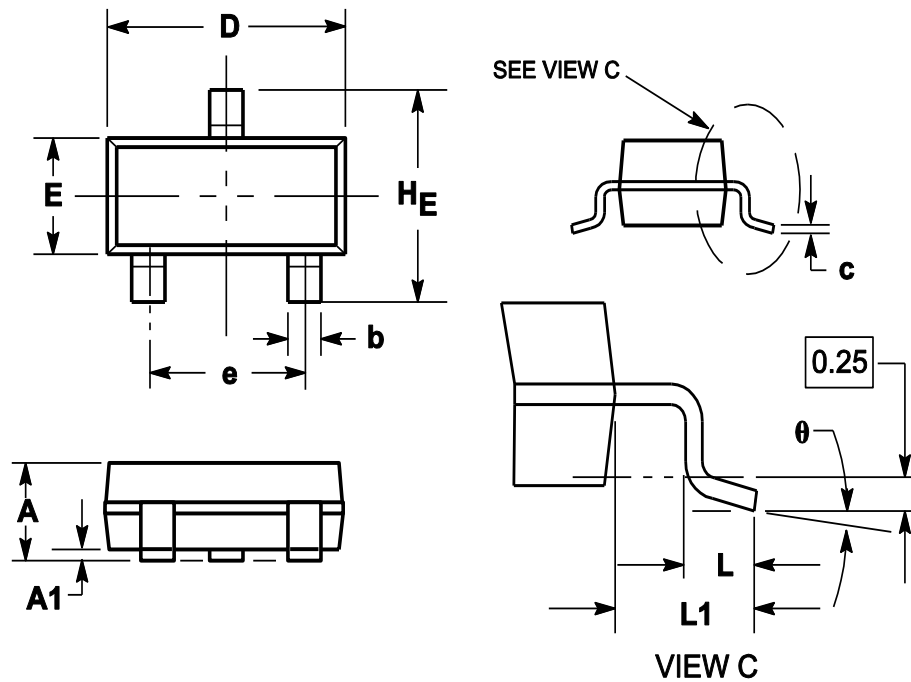
## Electrical Characteristics

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 30	- - - -	- 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 $I_C = 1\text{ A}$ , $I_B = 100\text{ mA}$	$V_{CE(sat)}$	-	-	250 500	mV
Base Emitter Saturation Voltage <sup>note1</sup> at $I_C = 1\text{ A}$ , $I_B = 100\text{ mA}$	$V_{BE(sat)}$	-	-	1.1	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 conditions, Pulse width $\leq$ 300 $\mu$ s, Duty cycle $\leq$ 2%.



**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
θ	0°		8°

**Ordering Information**

Device	Package	Reel Dimension (inch)	Shipping
FMMT491	SOT-23	7	3,000