

# FMMT591A

## SOT23 PNP silicon planar medium power transistor

### Features

Low equivalent on resistance  $R_{CE(sat)} = 350m\Omega$  at 1A

Part Marking Detail -91A

Complementary type -FMMT491A

### Absolute maximum ratings.

Parameter	Symbol	Value	Unit
Collector-Base voltage	$V_{CBO}$	-40	V
Collector-Emitter voltage	$V_{CEO}$	-40	V
Emitter-Base voltage	$V_{EBO}$	-5	V
Peak pulse current	$I_{CM}$	-2	A
Continuous Collector current	$I_C$	-1	A
Base current	$I_B$	-200	mA
Power dissipation at $T_{amb}=25^{\circ}C$	$P_{tot}$	500	mW
Operating an storage temperature range	$T_j ; T_{STG}$	-55 to +150	$^{\circ}C$

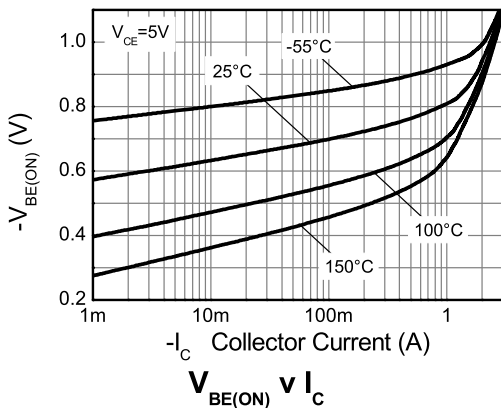
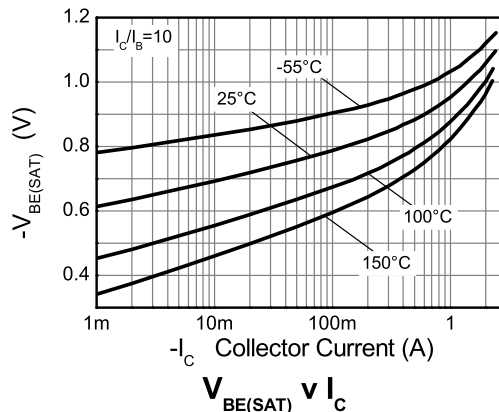
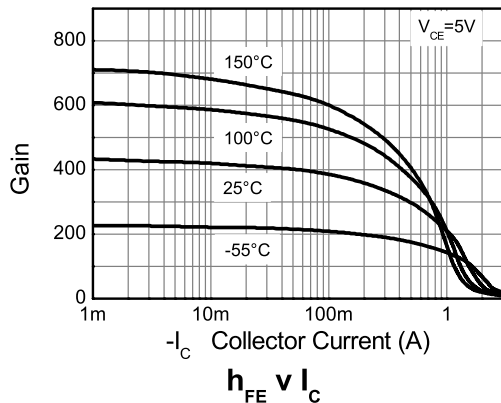
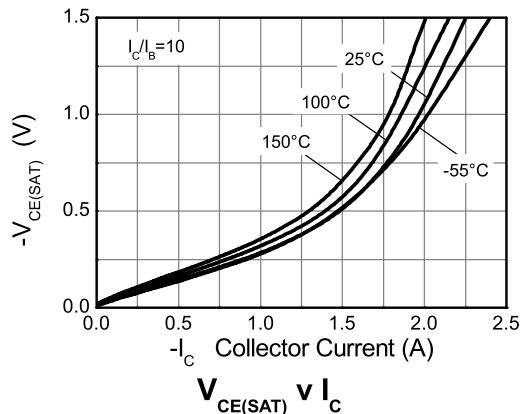
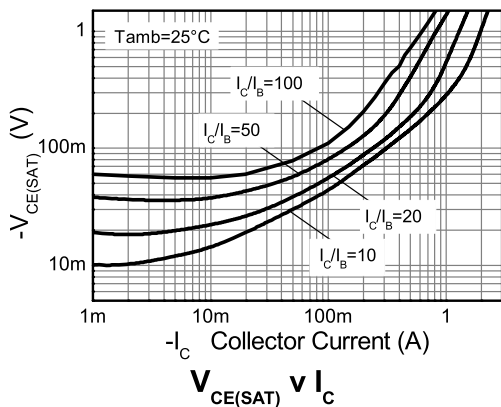
### Electrical characteristics (at $T_{amb} = 25^{\circ}C$ )

Parameter	Symbol	Min	Max	Unit	Conditions
Collector-Base breakdown voltage	$V_{(BR)CBO}$	-40		V	$I_C=-100\mu A$
Collector-Emitter breakdown voltage	$V_{(BR)CEO}$	-40		V	$I_C=-10mA^{(*)}$
Emitter-Base breakdown voltage	$V_{(BR)EBO}$	-5		V	$I_E=-100\mu A$
Collector cut-off current	$I_{CBO}$		-100	nA	$V_{CB}=-30V$
Emitter cut-off current	$I_{EBO}$		-100	nA	$V_{EB}=-4V$
Collector-Emitter cut-off current	$I_{CES}$		-100	nA	$V_{CES}=-30V$
Collector-Emitter saturation voltage	$V_{CE(sat)}$		-0.2	V	$I_C=-100mA, I_B=-1mA^{(*)}$
			-0.35	V	$I_C=-500mA, I_B=-20mA^{(*)}$
			-0.5	V	$I_C=-1A, I_B=-100mA^{(*)}$
Base-Emitter saturation voltage	$V_{BE(sat)}$		-1.1	V	$I_C=-1A, I_B=-50mA^{(*)}$
Base-Emitter turn-on voltage	$V_{BE(on)}$		-1.0	V	$I_C=-1A, V_{CE}=-5V^{(*)}$
Static forward current transfer ratio	$h_{FE}$	300	800		$I_C=-1mA,$
		300			$I_C=-100mA^{(*)}$
		250			$I_C=-500mA^{(*)}, V_{CE}=-5V$
		160			$I_C=-1A^{(*)}$
		30			$I_C=-2A^{(*)}$
Transition frequency	$f_T$	150		MHz	$I_C=-50mA, V_{CE}=-10V$ $f=100MHz$
Output capacitance	$C_{obo}$		10	pF	$V_{CB}=-10V, f=1MHz$

#### NOTES:

(\*) Measured under pulse conditions. Pulse width=300 $\mu s$ . Duty cycle 2%

## Electrical characteristics



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or

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