

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	$^{\circ}C$

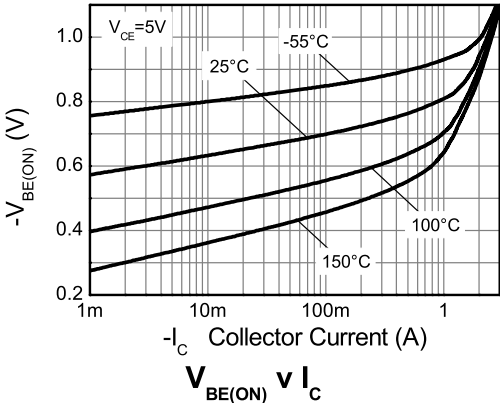
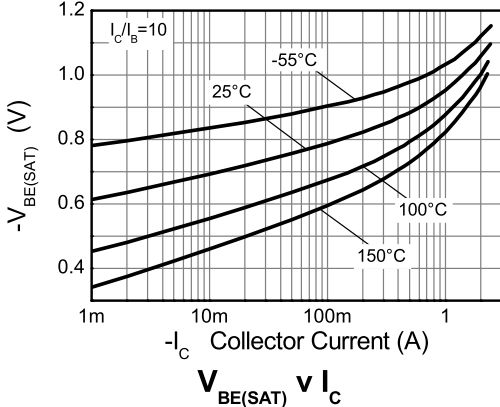
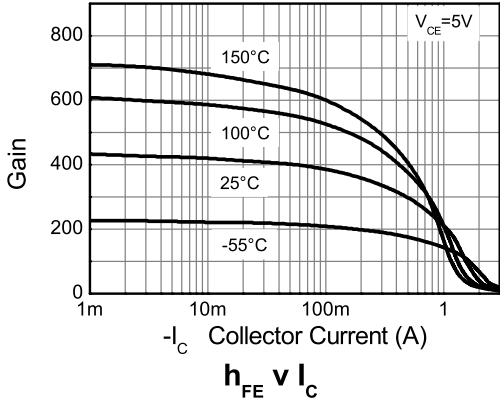
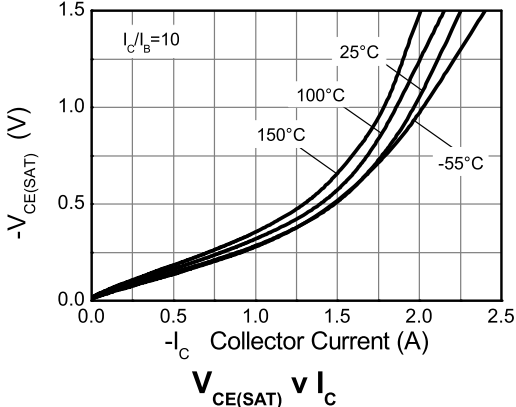
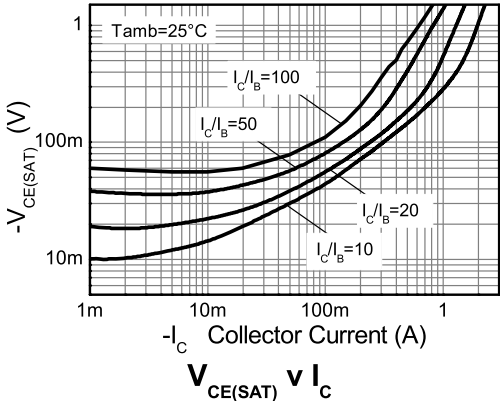
Electrical characteristics (at $T_{amb} = 25^{\circ}C$)

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			$I_C = -1mA,$
		300	800		$I_C = -100mA^{(*)}$
		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 μs . Duty cycle 2%

Electrical characteristics



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