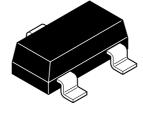
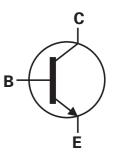
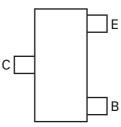


# FMMT497 SOT23 NPN silicon planar high voltage high performance transistor

Complementary part number - FMMT597 Device marking - 497







Pinout - top view

### Absolute maximum ratings

Parameter	Symbol	Value	Unit
Collector-base voltage	V <sub>CBO</sub>	300	V
Collector-emitter voltage	V <sub>CEO</sub>	300	V
Emitter-base voltage	V <sub>EBO</sub>	5	V
Continuous collector current	۱ <sub>C</sub>	500	mA
Peak pulse current	I <sub>СМ</sub>	1	А
Base current	Ι <sub>Β</sub>	200	mA
Power dissipation at T <sub>amb</sub> =25°C	P <sub>tot</sub>	500	mW
Operating and storage temperature range	T <sub>j</sub> :T <sub>stg</sub>	-55 to +150	°C

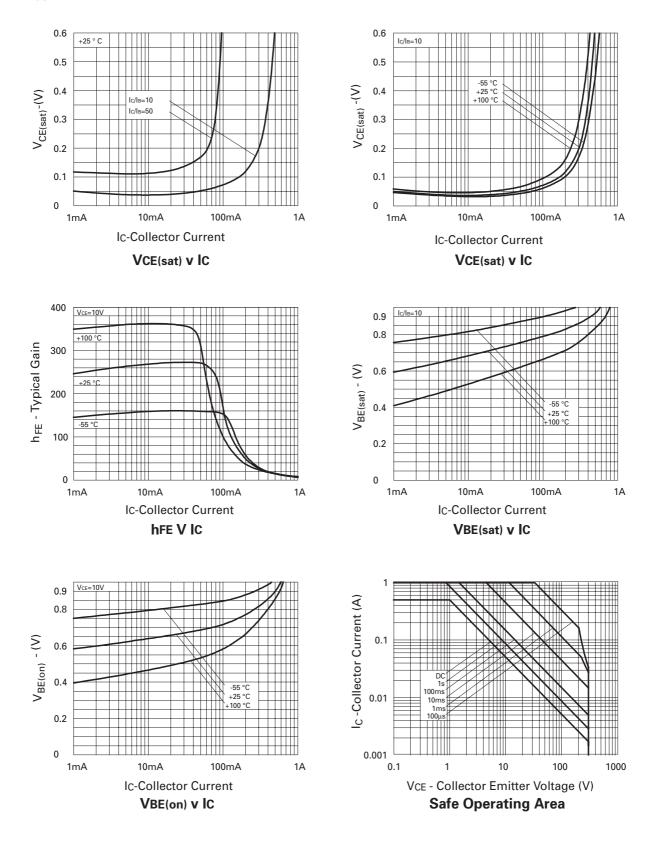
Parameter	Symbol	Min.	Тур.	Max	Unit	Conditions
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	300			V	I <sub>C</sub> = 100μA
Collector-emitter breakdown voltage	V <sub>CEO(sus)</sub>	300			V	I <sub>C</sub> = 10mA <sup>(*)</sup>
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	5			V	I <sub>E</sub> = 100μA
Collector cut-off current	I <sub>CBO</sub>			100	nA	V <sub>CB</sub> = 250V
Collector cut-off current	I <sub>CES</sub>			100	nA	V <sub>CES</sub> = 250V
Emitter cut-off current	I <sub>EBO</sub>			100	nA	V <sub>EB</sub> = 4V
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>			0.2 0.3	V V	I <sub>C</sub> = 100mA, I <sub>B</sub> = 10mA I <sub>C</sub> = 250mA, I <sub>B</sub> = 25mA
Base-emitter saturation voltage	V <sub>BE(sat)</sub>			1.0	V	I <sub>C</sub> = 250mA, I <sub>B</sub> = 25mA
Base-emitter turn on voltage	V <sub>BE(on)</sub>			1.0	V	I <sub>C</sub> = 250mA, V <sub>CE</sub> = 10V
Static forward current transfer ratio	h <sub>FE</sub>	100 80 20		300		$I_{C} = 1mA, V_{CE} = 10V$ $I_{C} = 100mA, V_{CE} = 10V^{(*)}$ $I_{C} = 250mA, V_{CE} = 10V^{(*)}$
Transition frequency	f <sub>T</sub>	75			MHz	I <sub>C</sub> = 50mA, V <sub>CE</sub> = 10V f = 100MHz
output capacitance	C <sub>obo</sub>			5	pF	V <sub>CB</sub> = 10V, f = 1MHz
Switching performance	td		53		ns	V <sub>CC</sub> = 100V, I <sub>C</sub> = 100mA,
	tr		126		ns	lb1 = -lb2 = 10mA
	ts		2.58		μs	
	tf		228		ns	

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

NOTES:

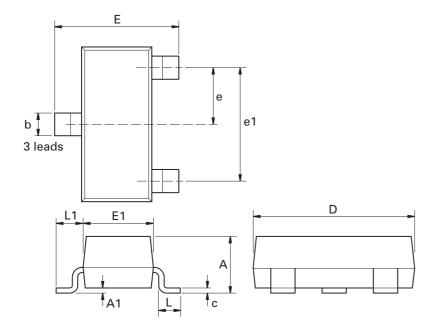
(\*) Measured under pulsed conditions. Pulse width = 300 $\mu$ s. Duty cycle  $\leq$ 2%.

### **Typical characteristics**



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## Package outline - SOT23



Dim.	Millin	neters	Inc	hes	Dim.	Dim. Millimeters		Inches	
	Min.	Max.	Min.	Max.		Min.	Max.	Max.	Max.
А	-	1.12	-	0.044	e1	1.90	NOM	0.075	NOM
A1	0.01	0.10	0.0004	0.004	E	2.10	2.64	0.083	0.104
b	0.30	0.50	0.012	0.020	E1	1.20	1.40	0.047	0.055
С	0.085	0.120	0.003	0.008	L	0.25	0.62	0.018	0.024
D	2.80	3.04	0.110	0.120	L1	0.45	0.62	0.018	0.024
е	0.95	NOM	0.0375	5 NOM	-	-	-	-	-

Note: Controlling dimensions are in millimeters. Approximate dimensions are provided in inches

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