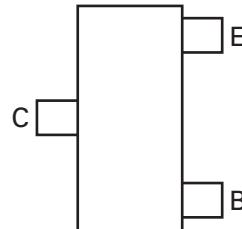
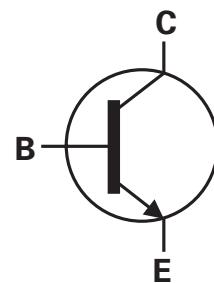
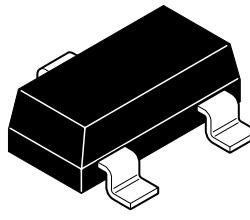


## FMMT497

# 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	$V_{CBO}$	300	V
Collector-emitter voltage	$V_{CEO}$	300	V
Emitter-base voltage	$V_{EBO}$	5	V
Continuous collector current	$I_C$	500	mA
Peak pulse current	$I_{CM}$	1	A
Base current	$I_B$	200	mA
Power dissipation at $T_{amb}=25^\circ\text{C}$	$P_{tot}$	500	mW
Operating and storage temperature range	$T_j; T_{stg}$	-55 to +150	°C

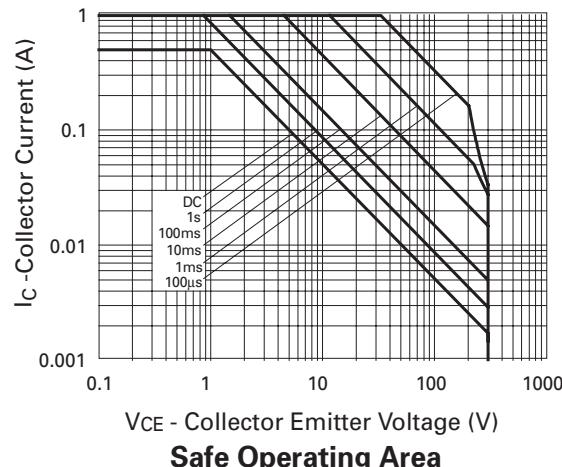
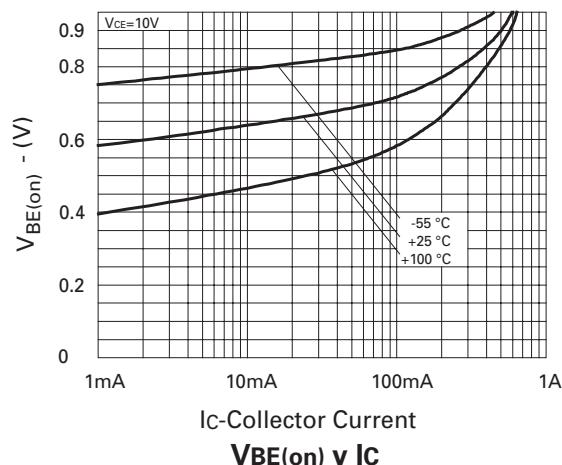
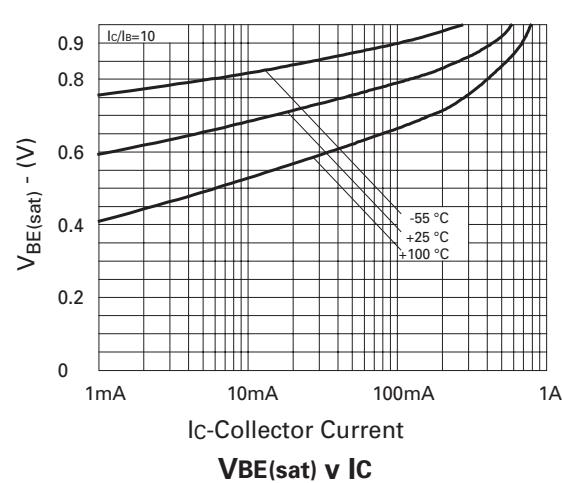
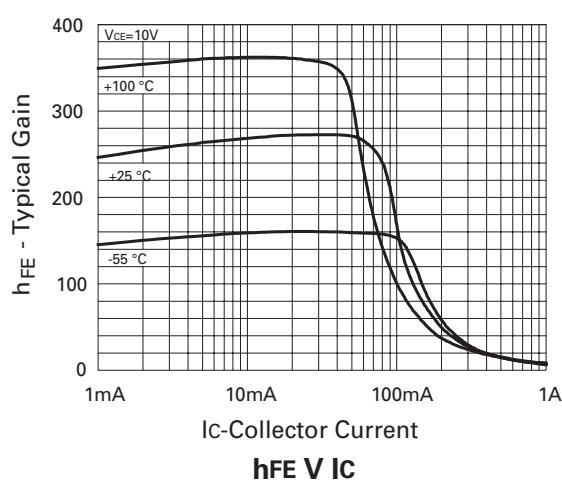
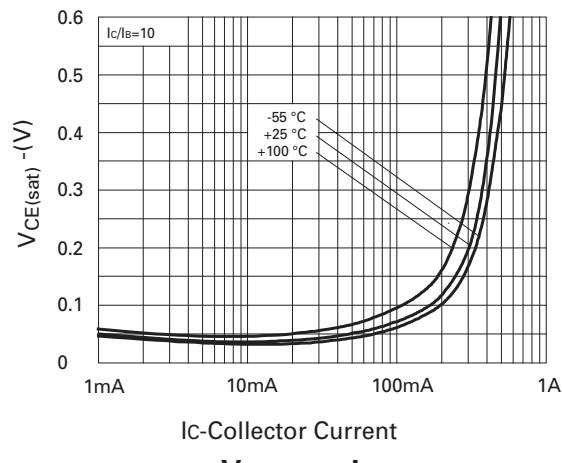
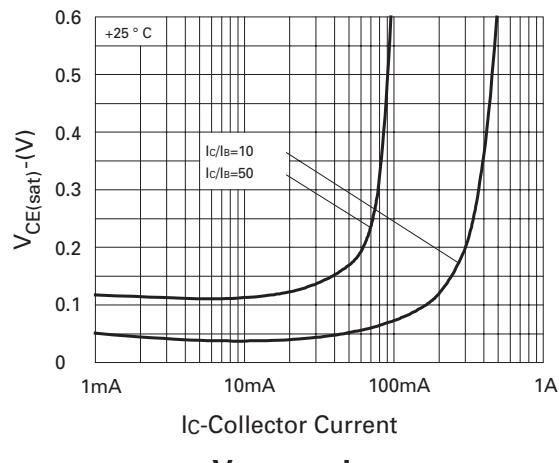
**Electrical characteristics (at  $T_{amb} = 25^\circ C$  unless otherwise stated)**

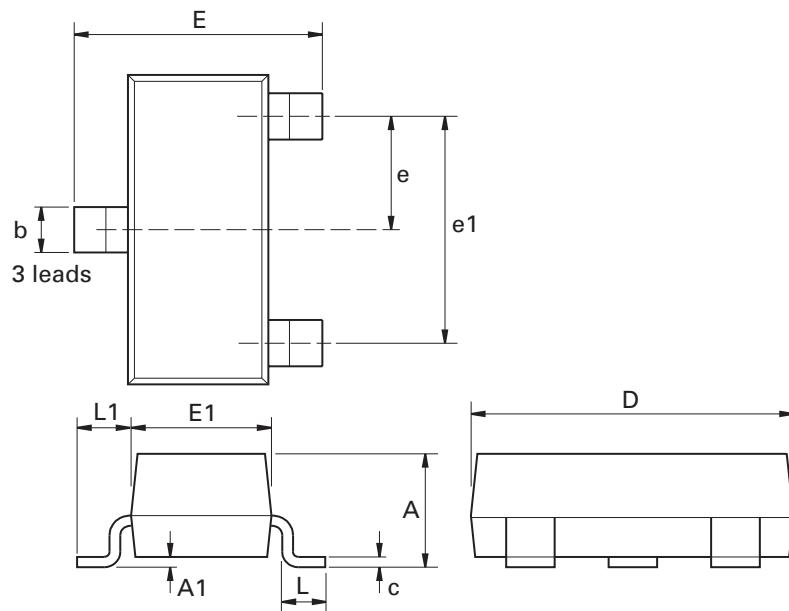
Parameter	Symbol	Min.	Typ.	Max	Unit	Conditions
Collector-base breakdown voltage	$V_{(BR)CBO}$	300			V	$I_C = 100\mu A$
Collector-emitter breakdown voltage	$V_{CEO(sus)}$	300			V	$I_C = 10mA$ (*)
Emitter-base breakdown voltage	$V_{(BR)EBO}$	5			V	$I_E = 100\mu A$
Collector cut-off current	$I_{CBO}$			100	nA	$V_{CB} = 250V$
Collector cut-off current	$I_{CES}$			100	nA	$V_{CES} = 250V$
Emitter cut-off current	$I_{EBO}$			100	nA	$V_{EB} = 4V$
Collector-emitter saturation voltage	$V_{CE(sat)}$			0.2 0.3	V V	$I_C = 100mA, I_B = 10mA$ $I_C = 250mA, I_B = 25mA$
Base-emitter saturation voltage	$V_{BE(sat)}$			1.0	V	$I_C = 250mA, I_B = 25mA$
Base-emitter turn on voltage	$V_{BE(on)}$			1.0	V	$I_C = 250mA, V_{CE} = 10V$
Static forward current transfer ratio	$h_{FE}$	100 80 20		300		$I_C = 1mA, V_{CE} = 10V$ $I_C = 100mA, V_{CE} = 10V$ (*) $I_C = 250mA, V_{CE} = 10V$ (*)
Transition frequency	$f_T$	75			MHz	$I_C = 50mA, V_{CE} = 10V$ $f = 100MHz$
output capacitance	$C_{obo}$			5	pF	$V_{CB} = 10V, f = 1MHz$
Switching performance	$td$		53		ns	$V_{CC} = 100V, I_C = 100mA,$ $Ib1 = -Ib2 = 10mA$
	$tr$		126		ns	
	$ts$		2.58		$\mu s$	
	$tf$		228		ns	

**NOTES:**

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

## Typical characteristics



**Package outline - SOT23**


Dim.	Millimeters		Inches		Dim.	Millimeters		Inches	
	Min.	Max.	Min.	Max.		Min.	Max.	Max.	Max.
A	-	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
C	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
e	0.95 NOM		0.0375 NOM		-	-	-	-	-

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

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"Obsolete"	Production has been discontinued

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