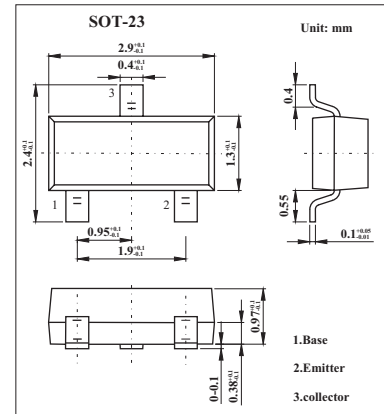


## High Voltage High Performance Transistor

## FMMT497



### Features

- SOT23 NPN silicon planar

### Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	300	V
Collector-emitter voltage	$V_{CEO}$	300	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	500	mA
Peak collector current	$I_{CM}$	1	A
Base current	$I_B$	200	mA
Power dissipation	$P_{tot}$	500	mW
Operating and storage temperature range	$T_j, T_{stg}$	-55 to +150	$^\circ\text{C}$

### Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}$	300			V
Collector-emitter breakdown voltage *	$V_{(BR)CEO}$	$I_C=10\text{mA}$	300			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}$	5			V
Collector cutoff current	$I_{CBO}$	$V_{CB}=250\text{V}$			100	nA
Collector Cut-Off Current	$I_{CES}$	$V_{CE}=250\text{V}$			100	nA
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4\text{V}$			100	nA
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C=100\text{mA}, I_B=10\text{mA}$ $I_C=250\text{mA}, I_B=25\text{mA}$			0.2 0.3	V
Base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C=250\text{mA}, I_B=25\text{mA}$			1.0	V
Base-emitter voltage *	$V_{BE(ON)}$	$I_C=250\text{mA}, V_{CE}=10\text{V}$			1.0	V
Static Forward Current Transfer Ratio	$h_{FE}$	$I_C=1\text{mA}, V_{CE}=10\text{V}$	100			
		$I_C=100\text{mA}, V_{CE}=10\text{V}^*$	80		300	
		$I_C=250\text{mA}, V_{CE}=10\text{V}^*$	20			
Transition Frequency	$f_T$	$I_C=50\text{mA}, V_{CE}=10\text{V}, f=100\text{MHz}$	75			MHz
Collector-Base Breakdown Voltage	$C_{obo}$	$V_{CB}=10\text{V}, f=1\text{MHz}$			5	pF

\* Pulse test:  $t_p = 300\mu\text{s}; d \leq 0.02$ .

### Marking

Marking	497
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