

## Medium Power Transistor

## FMMT449

## ■ Features

- Low equivalent on-resistance.

## ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V <sub>CB0</sub>	50	V
Collector-emitter voltage	V <sub>CEO</sub>	30	V
Emitter-base voltage	V <sub>EBO</sub>	5	V
Peak collector current	I <sub>CM</sub>	2	A
Collector current	I <sub>C</sub>	1	A
Base current	I <sub>B</sub>	200	mA
Power dissipation	P <sub>tot</sub>	500	mW
Operating and storage temperature range	T <sub>j</sub> , T <sub>stg</sub>	-55 to +125	°C

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =1mA, I <sub>E</sub> =0	50			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =0	30			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =100μA, I <sub>C</sub> =0	5			V
Collector cutoff current	I <sub>CB0</sub>	V <sub>CB</sub> =40V, I <sub>E</sub> =0			0.1	μA
		V <sub>CB</sub> =40V, T <sub>amb</sub> =100°C			10	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =4V, I <sub>C</sub> =0			0.1	μA
Collector-emitter saturation voltage *	V <sub>CE(sat)</sub>	I <sub>C</sub> =1A, I <sub>B</sub> =100mA			0.5	V
		I <sub>C</sub> =2A, I <sub>B</sub> =200mA			1.0	V
Base-emitter saturation voltage *	V <sub>BE(sat)</sub>	I <sub>C</sub> =1A, I <sub>B</sub> =100mA			1.25	V
Base-emitter voltage *	V <sub>BE(ON)</sub>	I <sub>C</sub> =1A, V <sub>CE</sub> =2V			1.0	V
Static Forward Current Transfer Ratio	h <sub>FE</sub>	I <sub>C</sub> =50mA, V <sub>CE</sub> =2V*	70			
		I <sub>C</sub> =500mA, V <sub>CE</sub> =2V*	100		300	
		I <sub>C</sub> =1A, V <sub>CE</sub> =2V*	80			
		I <sub>C</sub> =2A, V <sub>CE</sub> =2V*	40			
Current-gain-bandwidth product	f <sub>T</sub>	I <sub>C</sub> =50mA, V <sub>CE</sub> =10V, f=100MHz	150			MHz
Output capacitance	C <sub>ob0</sub>	V <sub>CB</sub> =10V, f=1MHz			15	pF

\* Pulse width=300μs. Duty cycle ≤2%

## ■ Marking

Marking	449
---------	-----

