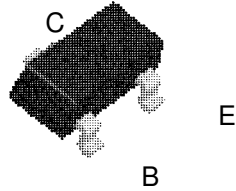


**FMMT449**



**SuperSOT™-3**

**NPN Low Saturation Transistor**

These devices are designed with high current gain and low saturation voltage with collector currents up to 2A continuous. Sourced from Process NB.

**Absolute Maximum Ratings\*** T<sub>A</sub> = 25°C unless otherwise noted

Symbol	Parameter	FMMT449	Units
V <sub>CEO</sub>	Collector-Emitter Voltage	30	V
V <sub>CBO</sub>	Collector-Base Voltage	50	V
V <sub>EBO</sub>	Emitter-Base Voltage	5	V
I <sub>C</sub>	Collector Current - Continuous - Peak Pulse Current	1 2	A
T <sub>J</sub> , T <sub>stg</sub>	Operating and Storage Junction Temperature Range	-55 to +150	°C

\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

**NOTES:**

- 1) These ratings are based on a maximum junction temperature of 150°C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

**Thermal Characteristics** T<sub>A</sub> = 25°C unless otherwise noted

Symbol	Characteristic	Max	Units
		FMMT449	
P <sub>D</sub>	Total Device Dissipation* Derate above 25°C	500 4	mW mW/°C
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient	250	°C/W

\*Device mounted on FR-4 PCB 4.5" X 5"; mounting pad 0.02 in<sup>2</sup> of 2oz copper.

**NPN Low Saturation Transistor**

(continued)

**Electrical Characteristics**

$T_A = 25^\circ\text{C}$  unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
<b>OFF CHARACTERISTICS</b>					
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 10\text{ mA}$	30		V
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C = 1\text{ mA}$	50		V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = 100\ \mu\text{A}$	5		V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = 40\text{ V}$ $V_{CB} = 40\text{ V}, T_A = 100^\circ\text{C}$		100 10	nA uA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = 4\text{ V}$		100	nA
<b>ON CHARACTERISTICS*</b>					
$h_{FE}$	DC Current Gain	$I_C = 50\text{ mA}, V_{CE} = 2\text{ V}$ $I_C = 500\text{ mA}, V_{CE} = 2\text{ V}$ $I_C = 1\text{ A}, V_{CE} = 2\text{ V}$ $I_C = 2\text{ A}, V_{CE} = 2\text{ V}$	70 100 80 40	300	-
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 1\text{ A}, I_B = 100\text{ mA}$ $I_C = 2\text{ A}, I_B = 200\text{ mA}$		500 1.0	mV V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 1\text{ A}, I_B = 100\text{ mA}$		1.25	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = 1\text{ A}, V_{CE} = 2\text{ V}$		1	V
<b>SMALL SIGNAL CHARACTERISTICS</b>					
$C_{obo}$	Output Capacitance	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$		15	pF
$f_T$	Transition Frequency	$I_C = 50\text{ mA}, V_{CE} = 10\text{ V}, f = 100\text{ MHz}$	150		MHz

\*Pulse Test: Pulse Width  $\leq 300\ \mu\text{s}$ , Duty Cycle  $\leq 2.0\%$

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FACT™	QST™	
FACT Quiet Series™	Quiet Series™	
FAST®	SuperSOT™-3	
FASTr™	SuperSOT™-6	
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## PRODUCT STATUS DEFINITIONS

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