

SOT23 PNP SILICON PLANAR MEDIUM POWER TRANSISTORS

FMMT549 FMMT549A

ISSUE 3 - OCTOBER 1995

FEATURES

* Low equivalent on-resistance; $R_{CE(sat)}$ 250m Ω at 1A

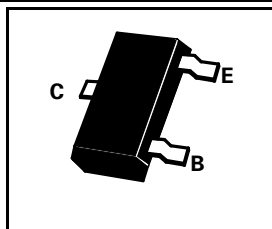
* 1 Amp continuous current

COMPLEMENTARY TYPES – FMMT549 – FMMT449

FMMT549A – N/A

PARTMARKING DETAIL – FMMT549 – 549

FMMT549A – 59A



ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	-35	V
Collector-Emitter Voltage	V_{CEO}	-30	V
Emitter-Base Voltage	V_{EBO}	-5	V
Peak Pulse Current	I_{CM}	-2	A
Continuous Collector Current	I_C	-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	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^\circ\text{C}$ unless otherwise stated).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Breakdown Voltages	$V_{(BR)CBO}$	-35			V	$I_C=-100\mu\text{A}$
	$V_{(BR)CEO}$	-30			V	$I_C=-10\text{mA}^*$
	$V_{(BR)EBO}$	-5			V	$I_E=-100\mu\text{A}$
Cut-Off Currents	I_{CBO}			-0.1 -10	μA μA	$V_{CB}=-30\text{V}$ $V_{CB}=-30\text{V}, T_{amb}=100^\circ\text{C}$
	I_{EBO}			-0.1	μA	$V_{EB}=-4\text{V}$
Saturation Voltages	$V_{CE(sat)}$		-0.25 -0.50	-0.50 -0.75	V V	$I_C=-1\text{A}, I_B=-100\text{mA}^*$ $I_C=-2\text{A}, I_B=-200\text{mA}^*$
		FMMT549A		-0.30	V	$I_C=-100\text{mA}, I_B=-1\text{mA}^*$
	$V_{BE(sat)}$		-0.9	-1.25	V	$I_C=-1\text{A}, I_B=-100\text{mA}^*$
Base Emitter Turn-on Voltage	$V_{BE(on)}$		-0.85	-1	V	$I_C=-1\text{A}, V_{CE}=-2\text{V}^*$
Static Forward Current Transfer Ratio	h_{FE}	70	200			$I_C=-50\text{mA}, V_{CE}=-2\text{V}^*$
		80	130			$I_C=-1\text{A}, V_{CE}=-2\text{V}^*$
		40	80			$I_C=-2\text{A}, V_{CE}=-2\text{V}^*$
	FMMT549	100	160	300		$I_C=-500\text{mA}, V_{CE}=-2\text{V}^*$
FMMT549A	150	200	500		$I_C=-500\text{mA}, V_{CE}=-2\text{V}^*$	
Transition Frequency	f_T	100			MHz	$I_C=-100\text{mA}, V_{CE}=-5\text{V}$ $f=100\text{MHz}$
Output Capacitance	C_{obo}			25	pF	$V_{CB}=-10\text{V}, f=1\text{MHz}$
Switching Times	t_{on}		50		ns	$I_C=-500\text{mA}, V_{CC}=-10\text{V}$
	t_{off}		300		ns	$I_{B1}=I_{B2}=-50\text{mA}$

*Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$

FMMT549 FMMT549A

TYPICAL CHARACTERISTICS

