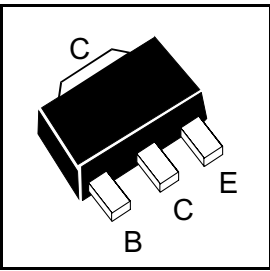


# SOT89 PNP SILICON PLANAR MEDIUM POWER TRANSISTOR

**FCX591A**

ISSUE 3 - OCTOBER 1995

PART MARKING DETAIL - P2  
COMPLEMENTARY TYPE - FCX491A



## ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	-40	V
Collector-Emitter Voltage	$V_{CEO}$	-40	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 $T_{amb}=25^{\circ}C$	$P_{tot}$	1	W
Operating and Storage Temperature Range	$T_j; T_{stg}$	-65 to +150	$^{\circ}C$

## ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}C$ ).

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Breakdown Voltages	$V_{(BR)CBO}$	-40		V	$I_C = -100\mu A$
	$V_{(BR)CEO}$	-40		V	$I_C = -10mA^*$
	$V_{(BR)EBO}$	-5		V	$I_E = -100\mu A$
Collector Cut-Off Current	$I_{CBO}$		-100	nA	$V_{CB} = -30V$
Emitter Cut-Off Current	$I_{EBO}$		-100	nA	$V_{EB} = -4V$
Collector-Emitter Cut-Off Current	$I_{CES}$		-100	nA	$V_{CE} = -30V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-0.2	V	$I_C = -100mA, I_B = -1mA^*$
			-0.35	V	$I_C = -500mA, I_B = -20mA^*$
			-0.5	V	$I_C = -1A, I_B = -100mA^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-1.1	V	$I_C = -1A, I_B = -50mA^*$
Base-Emitter Turn-on Voltage	$V_{BE(on)}$		-1.0	V	$I_C = -1A, V_{CE} = -5V^*$
Static Forward Current Transfer Ratio	$h_{FE}$	300	800		$I_C = -1mA,$ $I_C = -100mA^*,$ $I_C = -500mA^*, V_{CE} = -5V$ $I_C = -1A^*,$ $I_C = -2A^*,$
		300			
		250			
		160			
		30			
Transition Frequency	$f_T$	150		MHz	$I_C = -50mA, V_{CE} = -10V$ $f = 100MHz$
Output Capacitance	$C_{obo}$		10	pF	$V_{CB} = -10V, f = 1MHz$

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

Spice parameter data is available upon request for this device

For typical characteristics graphs see FMMT591A datasheet



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