

SOT89 NPN SILICON PLANAR MEDIUM POWER TRANSISTOR

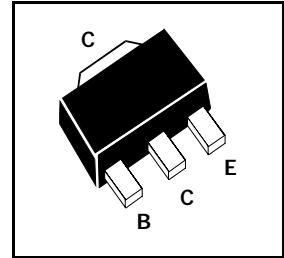
FCX491A

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FEATURES

* 1 Amp continuous current

COMPLEMENTARY TYPE - FCX591A
PARTMARKING DETAILS - N2



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_C	1	A
Continuous Collector Current	I_{CM}	2	A
Power Dissipation	P_{TOT}	1	W
Operating and Storage Temperature Range	$T_j; T_{stg}$	-65 to +150	°C

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

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Breakdown Voltages	$V_{(BR)CBO}$	40		V	$I_C = 100\mu\text{A}$
	$V_{(BR)CEO}$	40		V	$I_C = 10\text{mA}^*$
	$V_{(BR)EBO}$	5		V	$I_E = 100\mu\text{A}$
Collector Cut-Off Currents	I_{CBO}		100	nA	$V_{CB} = 30\text{V}$,
	I_{CES}		100	nA	$V_{CE} = 30\text{V}$
Emitter Cut-Off Current	I_{EBO}		100	nA	$V_{EB} = 4\text{V}$
Emitter Saturation Voltages	$V_{CE(sat)}$		0.3 0.5	V	$I_C = 500\text{mA}$, $I_B = 50\text{mA}^*$ $I_C = 1\text{A}$, $I_B = 100\text{mA}^*$
	$V_{BE(sat)}$		1.1	V	$I_C = 1\text{A}$, $I_B = 100\text{mA}^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$		1.0	V	$I_C = 1\text{A}$, $V_{CE} = 5\text{V}^*$
Static Forward Current Transfer	h_{FE}	300 300 200 35	900		$I_C = 1\text{mA}$, $V_{CE} = 5\text{V}$ $I_C = 500\text{mA}$, $V_{CE} = 5\text{V}^*$ $I_C = 1\text{A}$, $V_{CE} = 5\text{V}^*$ $I_C = 2\text{A}$, $V_{CE} = 5\text{V}^*$
Transitional Frequency	f_T	150		MHz	$I_C = 50\text{mA}$, $V_{CE} = 10\text{V}$ $f = 100\text{MHz}$
Collector-Base Breakdown Voltage	C_{obo}		10	pF	$V_{CB} = 10\text{V}$ $f = 1\text{MHz}$

*Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$
Spice parameter data is available upon request for this device
For typical Characteristics graphs see FMMT491A datasheet