

# SOT89 PNP SILICON PLANAR HIGH VOLTAGE TRANSISTOR

## FCX558

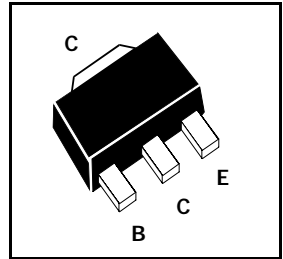
ISSUE 3 – MARCH 1996

### FEATURES

- \* 400 Volt  $V_{CEO}$
- \*  $P_{tot}$  = 1 Watt

COMPLEMENTARY TYPE – FCX458

PARTMARKING DETAIL – P58



### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	-400	V
Collector-Emitter Voltage	$V_{CEO}$	-400	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Continuous Collector Current	$I_C$	-200	mA
Peak Pulse Current	$I_{CM}$	-500	mA
Power Dissipation at $T_{amb}=25^\circ\text{C}$	$P_{tot}$	1	W
Operating and Storage Temperature Range	$T_j, T_{stg}$	-65 to +150	$^\circ\text{C}$

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

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-400		V	$I_C = -100\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-400		V	$I_C = -10\text{mA}^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5		V	$I_E = -100\mu\text{A}$
Collector Cut-Off Current	$I_{CBO}, I_{CES}$		-100	nA	$V_{CB} = -320\text{V}; V_{CES} = 320\text{V}$
Emitter Cut-Off Current	$I_{EBO}$		-100	nA	$V_{EB} = -4\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-0.2 -0.5	V	$I_C = -20\text{mA}, I_B = -2\text{mA}^*$ $I_C = -50\text{mA}, I_B = -6\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-0.9	V	$I_C = -50\text{mA}, I_B = -5\text{mA}^*$
Base-Emitter Turn On Voltage	$V_{BE(on)}$		-0.9	V	$I_C = -50\text{mA}, V_{CE} = -10\text{V}^*$
Static Forward Current Transfer Ratio	$h_{FE}$	100 100 15	300		$I_C = -1\text{mA}, V_{CE} = -10\text{V}$ $I_C = -50\text{mA}, V_{CE} = -10\text{V}^*$ $I_C = -100\text{mA}, V_{CE} = -10\text{V}^*$
Transition Frequency	$f_T$	50		MHz	$I_C = -10\text{mA}, V_{CE} = -20\text{V}$ $f = 20\text{MHz}$
Collector-Base Breakdown Voltage	$C_{obo}$		5	pF	$V_{CB} = -20\text{V}, f = 1\text{MHz}$
Switching times	$t_{on}$ $t_{off}$		95 Typical 1600 Typical	ns ns	$I_C = -50\text{mA}, V_C = -100\text{V}$ $I_{B1} = -5\text{mA}, I_{B2} = -10\text{mA}$

\*Measured under pulsed conditions. Pulse width=300 $\mu\text{s}$ . Duty cycle  $\leq 2\%$   
Spice parameter data is available upon request for this device  
For typical characteristics graphs see FZT558 datasheet.