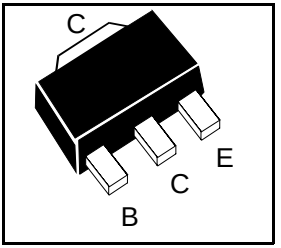
SOT89 NPN SILICON PLANAR HIGH VOLTAGE TRANSISTOR

FCX458

ISSUE 3 – OCTOBER 1995

FEATURES

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



COMPLEMENTARY TYPE – FCX558

PARTMARKING DETAIL – N58

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	225	mA
Peak Pulse Current	I_{CM}	500	mA
Power Dissipation at T_{amb}=25°C	P_{tot}	1	W
Operating and Storage Temperature Range	T_j:T_{stg}	-65 to +150	°C

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C).

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Breakdown Voltages	$V_{(BR)CBO}$	400		V	I_C=100μA
	$V_{CEO(sus)}$	400		V	I_C=10mA*
	$V_{(BR)EBO}$	5		V	I_E=100μA
Collector Cut-Off Currents	I_{CBO}		100	nA	V_{CB}=320V
	I_{CES}		100	nA	V_{CE}=320V
Emitter Cut-Off Current	I_{EBO}		100	nA	V_{EB}=4V
Emitter Saturation Voltages	$V_{CE(sat)}$		0.2 0.5	V V	I_C=20mA, I_B=2mA* I_C=50mA, I_B=6mA*
	$V_{BE(sat)}$		0.9	V	I_C=50mA, I_B=5mA*
Base-Emitter Turn On Voltage	$V_{BE(on)}$		0.9	V	I_C=50mA, V_{CE}=10V*
Static Forward Current Transfer Ratio	h_{FE}	100 100 15	300		I_C=1mA, V_{CE}=10V I_C=50mA, V_{CE}=10V* I_C=100mA, V_{CE}=10V**
Transition Frequency	f_T	50		MHz	I_C=10mA, V_{CE}=20V f=20MHz
Collector-Base Breakdown Voltage	C_{obo}		5	pF	V_{CB}=20V, f=1MHz
Switching times	t_{on} t_{off}	135 Typical 2260 Typical		ns ns	I_C=50mA, V_C=100V I_{B1}=5mA, I_{B2}=-10mA

*Measured under pulsed conditions. Pulse width=300μs. Duty cycle ≤ 2%

Spice parameter data is available upon request for this device

For typical characteristics graphs see FMMT458 datasheet