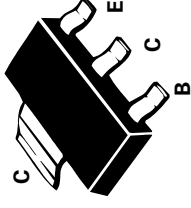


**SOT223 NPN SILICON PLANAR  
MEDIUM POWER TRANSISTOR**

ISSUE 3 - NOVEMBER 1995

**FZT489**



COMPLEMENTARY TYPE – FZT589  
PARTMARKING DETAIL – FZT489

**ABSOLUTE MAXIMUM RATINGS.**

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CB0}$	50	V
Collector-Emitter Voltage	$V_{CE0}$	30	V
Emitter-Base Voltage	$V_{EB0}$	5	V
Continuous Collector Current	$I_C$	1	A
Peak Pulse Current	$I_{CM}$	4	A
Base Current	$I_B$	200	mA
Power Dissipation at $T_{amb}=25^{\circ}C$	$P_{tot}$	2	W
Operating and Storage Temperature Range	$T_j, T_{sg}$	-55 to +150	$^{\circ}C$

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

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Breakdown Voltages	$V_{BR/CBO}$	50		V	$I_C=100\mu A$
	$V_{CE0(sus)}$	30		V	$I_C=10mA^*$
	$V_{BR/EB0}$	5		V	$I_E=100\mu A$
Collector Cut-Off Current	$I_{CBO}$		100	nA	$V_{CE}=30V$
	$I_{CES}$		100	nA	$V_{CES}=30V$
Emitter Cut-Off Current	$I_{EBO}$		100	nA	$V_{EB}=4V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	0.3		V	$I_C=1A, I_B=100mA^*$
		0.6		V	$I_C=2A, I_B=200mA^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		1.1	V	$I_C=1A, I_B=100mA^*$
Base-Emitter Turn On Voltage	$V_{BE(on)}$		1.0	V	$I_C=1A, V_{CE}=2V^*$
Static Forward Current Transfer Ratio	$h_{FE}$	100			$I_C=1mA, V_{CE}=2V^*$
		100			$I_C=1A, V_{CE}=2V^*$
	60			$I_C=2A, V_{CE}=2V^*$	
	20			$I_C=4A, V_{CE}=2V^*$	
Transition Frequency	$f_T$	150		MHz	$I_C=50mA, V_{CE}=10V, f=100MHz$
Collector-Base Breakdown Voltage	$C_{ob0}$		10	pF	$V_{CB}=10V, f=1MHz$

\*Measured under pulsed conditions. Pulse width=300 $\mu s$ . Duty cycle  $\leq 2\%$   
For typical characteristics graphs see FMMIT449 datasheet