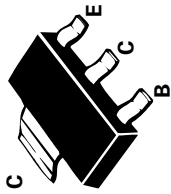


SOT223 NPN SILICON PLANAR
DARLINGTON TRANSISTOR
ISSUE 3 – JANUARY 1996

FZTA14

PARTMARKING DETAIL:- DEVICE TYPE IN FULL

COMPLEMENTARY TYPE :- FZTA64



SOT223

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Emitter Voltage	V_{CES}	30	V
Collector-Base Voltage	V_{CBO}	30	V
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Base Voltage	V_{EBO}	10	V
Continuous Collector Current	I_C	1	A
Power Dissipation at $T_{amb}=25^{\circ}\text{C}$	P_{tot}	2	W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 to +150	$^{\circ}\text{C}$

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CES}$	30			V	$I_C=100\mu\text{A}$, $V_{BE}=0$
Collector Cut-Off Current	I_{CBO}			100	nA	$V_{CB}=30\text{V}$, $I_E=0$
Emitter Cut-Off Current	I_{EBO}			100	nA	$V_{EB}=10\text{V}$, $I_C=0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			1.5 1.6	V V	$I_C=100\text{mA}$, $I_B=0.1\text{mA}^*$ $I_C=1\text{A}$, $I_B=1\text{mA}^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$			2.0	V	$I_C=100\text{mA}$, $V_{CE}=5\text{V}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			2.0 2.2	V V	$I_C=100\text{mA}$, $I_B=0.1\text{mA}$ $I_C=1\text{A}$, $I_B=1\text{mA}$
Static Forward Current Transfer Ratio	h_{FE}	10K 20K 5K				$I_C=10\text{mA}$, $V_{CE}=5\text{V}^*$ $I_C=100\text{mA}$, $V_{CE}=5\text{V}^*$ $I_C=1\text{A}$, $V_{CE}=5\text{V}^*$
Transition Frequency	f_T		170		MHz	$I_C=50\text{mA}$, $V_{CE}=5\text{V}^*$ $f=20\text{MHz}$

* Measured under pulsed conditions. Pulse Width=300 μ s. Duty cycle $\leq 2\%$
Spice parameter data is available upon request for this device
For typical characteristics graphs see FMMT38C datasheet.