

**SOT323 NPN SILICON PLANAR
HIGH PERFORMANCE TRANSISTOR**

ISSUE 2 – MARCH 2007

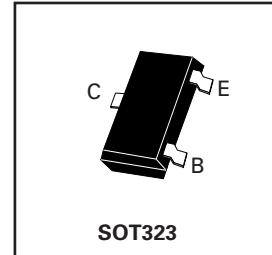
FEATURES

- * Extremely low saturation voltage
- * 500mW power dissipation
- * 1 Amp continuous collector current (I_C)

APPLICATIONS

- * Ideally suited for space / weight critical applications

ZUMT491



ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector Base Voltage	V_{CBO}	80	V
Collector Emitter Voltage	V_{CEO}	60	V
Emitter Base Voltage	V_{EBO}	5	V
Peak Pulse Current	I_{CM}	2	A
Continuous Collector Current	I_C	1	A
Base Current	I_B	200	mA
Power Dissipation at $T_{amb}=25^\circ\text{C}$	P_{tot}	500	mW
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	$V_{(BR)CBO}$	80			V	$I_C=100\mu\text{A}, I_E=0$
Collector Emitter Breakdown Voltage	$V_{CEO(sus)}$	60			V	$I_C=10\text{mA}^*, I_B=0$
Emitter Base Breakdown Voltage	$V_{(BR)EBO}$	5			V	$I_E=100\mu\text{A}, I_C=0$
Collector Cut Off Current	I_{CBO}			100	nA	$V_{CB}=60\text{V}$
Collector Cut Off Current	I_{CES}			100	nA	$V_{CE}=60\text{V}$
Emitter Cut Off Current	I_{EBO}			100	nA	$V_{EB}=4\text{V}, I_C=0$
Collector Emitter Saturation Voltage	$V_{CE(sat)}$			0.25 0.50	V V	$I_C=500\text{mA}, I_B=50\text{mA}^*$ $I_C=1\text{A}, I_B=100\text{mA}^*$
Base Emitter Saturation Voltage	$V_{BE(sat)}$			1.1	V	$I_C=1\text{A}, I_B=100\text{mA}^*$
Base Emitter Turn On Voltage	$V_{BE(on)}$			1.0	V	$I_C=1\text{A}, V_{CE}=5\text{V}^*$

* Measured under pulsed conditions. Pulse width 300 μS . Duty cycle $\leq 2\%$.

