

**SOT323 NPN SILICON PLANAR  
HIGH PERFORMANCE TRANSISTOR**

ISSUE 2 – MARCH 2007

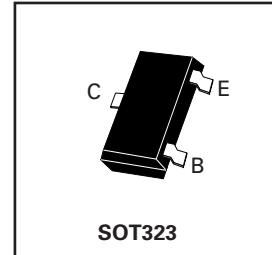
**FEATURES**

- \* 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 $\mu\text{S}$ . Duty cycle  $\leq 2\%$ .

