

# SOT323 PNP SILICON PLANAR HIGH PERFORMANCE TRANSISTOR

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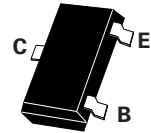
## ZUMT591

### FEATURES

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

### APPLICATIONS

- \* Ideally suited for space / weight critical applications



SOT323

### 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	$V_{CE(sat)}$			-0.3 -0.6	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	$V_{BE(sat)}$			-1.2	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@2%

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Static Forward Current Transfer Ratio	$h_{FE}$	100 100 80 15		300		$I_C = -1\text{mA}, V_{CE} = -5\text{V}^*$ $I_C = -500\text{mA}, V_{CE} = -5\text{V}^*$ $I_C = -1\text{A}, V_{CE} = -5\text{V}^*$ $I_C = -2\text{A}, V_{CE} = -5\text{V}^*$
Transition Frequency	$f_T$	150			MHz	$I_C = -50\text{mA}, V_{CE} = -10\text{V}^*$ $f = 100\text{MHz}$
Output Capacitance	$C_{obo}$			10	pF	$V_{CB} = -10\text{V}, f = 1\text{MHz}$

\* Measured under pulsed conditions. Pulse width=300 $\mu\text{s}$ . Duty cycle@2%

## NOTE

This data is derived from development material and does not necessarily mean that the device will go into production

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