

# SOT323 PNP SILICON PLANAR HIGH PERFORMANCE TRANSISTOR

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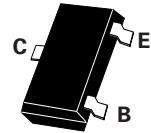
## ZUMT591

### 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 $T_{amb} = 25^{\circ}C$ ).

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

\* Measured under pulsed conditions. Pulse width=300 $\mu$ 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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Europe	Americas	Asia Pacific	Corporate Headquarters
Zetex GmbH Streitfeldstraße 19 D-81673 München Germany  Telefon: (49) 89 45 49 49 0 Fax: (49) 89 45 49 49 49 <a href="mailto:europa.sales@zetex.com">europa.sales@zetex.com</a>	Zetex Inc 700 Veterans Memorial Hwy Hauppauge, NY 11788 USA  Telephone: (1) 631 360 2222 Fax: (1) 631 360 8222 <a href="mailto:usa.sales@zetex.com">usa.sales@zetex.com</a>	Zetex (Asia) Ltd 3701-04 Metroplaza Tower 1 Hing Fong Road, Kwai Fong Hong Kong  Telephone: (852) 26100 611 Fax: (852) 24250 494 <a href="mailto:asia.sales@zetex.com">asia.sales@zetex.com</a>	Zetex Semiconductors plc Zetex Technology Park Chadderton, Oldham, OL9 9LL United Kingdom  Telephone (44) 161 622 4444 Fax: (44) 161 622 4446 <a href="mailto:hq@zetex.com">hq@zetex.com</a>

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