

SOT323 PNP SILICON PLANAR HIGH PERFORMANCE TRANSISTOR

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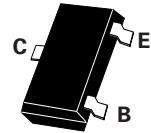
ZUMT591

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 μs . 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 μs . 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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