



**THE DATASHEET OF
ZUMT918TA**



SOT323 NPN SILICON PLANAR VHF/UHF TRANSISTOR

ZUMT918

ISSUE 1 – DECEMBER 1998

PARTMARKING DETAIL – T5



ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	30	V
Collector-Emitter Voltage	V_{CEO}	15	V
Emitter-Base Voltage	V_{EBO}	3	V
Continuous Collector Current	I_C	100	mA
Power Dissipation at $T_{amb}=25^{\circ}C$	P_{tot}	330	mW
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	$^{\circ}C$

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	30			V	$I_C=1\mu A, I_E=0$
Collector-Emitter Sustaining Voltage	$V_{CEO(sus)}$	15			V	$I_C=3mA, I_B=0^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	3			V	$I_E=10\mu A, I_C=0$
Collector Cut-Off Current	I_{CBO}			0.05	μA	$V_{CB}=15V, I_E=0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			0.4	V	$I_C=10mA, I_B=1mA$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			1.0	V	$I_C=10mA, I_B=1mA$
Static Forward Current Transfer Ratio	h_{FE}	20				$I_C=3mA, V_{CE}=1V$
Transition Frequency	f_T	600			MHz	$I_C=4mA, V_{CE}=10V$ $f=100MHz$
Output Capacitance	C_{obo}			3.0 1.7	pF pF	$V_{CB}=0V, f=1MHz$ $V_{CB}=10V, f=1MHz$
Input Capacitance	C_{ibo}			1.6	pF	$V_{EB}=0.5V, f=1MHz$
Noise Figure	N			6.0	dB	$V_{CE}=6V, I_C=1mA$ $f=60MHz, R_G=400\Omega$
Common Emitter Power Gain	G_{pe}		15		dB	$V_{CB}=12V, I_C=6mA$ $f=200MHz$







*Measured under pulsed conditions. Pulse Width=300 μs . Duty cycle $\leq 2\%$
Spice parameter data is available upon request for this device

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