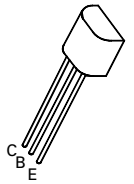
NPN SILICON PLANAR R.F. MEDIUM POWER TRANSISTOR

ZTX3866

ISSUE 2 – MARCH 94

FEATURES

* 1W P_{OUT} at 175 MHz, 28V, 18dB typical
* 1W P_{OUT} at 400 MHz, 28V, 9.7dB typical
* High P_{tot}
* High efficiency



E-Line
TO92 Compatible

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	55	V
Collector-Emitter Voltage	V_{CEO}	30	V
Collector-Emitter Voltage	V_{CER}	55	V
Emitter-Base Voltage	V_{EBO}	3.5	V
Continuous Collector Current	I_{CM}	400	mA
Power Dissipation	P_{tot}	350	mW
Operating and Storage Temperature Range	T_j:T_{stg}	-55 to +175	°C

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C unless otherwise stated).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	55			V	I_C=100μA, I_E=0
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO(sus)}$	30			V	I_C=5mA, I_B=0
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	3.5			V	I_E=100μA, I_E=0
Collector Emitter Cut-Off Current	I_{CEO}			20	μA	V_{CB}=28V, I_B=0
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			1.0	V	I_C=100mA, I_B=20mA
Collector-Emitter Sustaining Voltage	$V_{(BR)CER(sus)}$	55			V	IC=5mA, R_{BE}=10Ω
Static Forward Current Transfer	h_{FE}	15		200		I_C=50mA, V_{CE}=5V
Transitional Frequency	f_T	400	700		MHz	I_C=25mA, V_{CE}=15V f=100MHz
Output Capacitance	C_{obo}			3.0	pF	V_{CB}=30V, I_E=0, f=1MHz
R.F. Power Output	P_{OUT}	700	900		mW	V_{CC}=28V, P_{IN}=100mW f=400MHz
Efficiency	η	50	70		%	