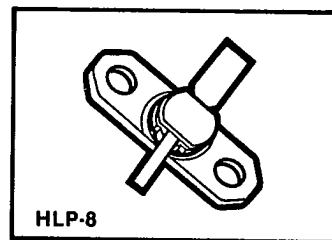


8825024 T R W ELEK CMPNT, R F
TRW2307

Microwave Power Transistor

- Common Base
- Gold Metalized
- Hermetic
- 1 to 3 GHz
- "TX" Screenable
- Diffused Ballast Resistors
- 2.3 GHz
- 7 W — 20 V
- ∞ VSWR



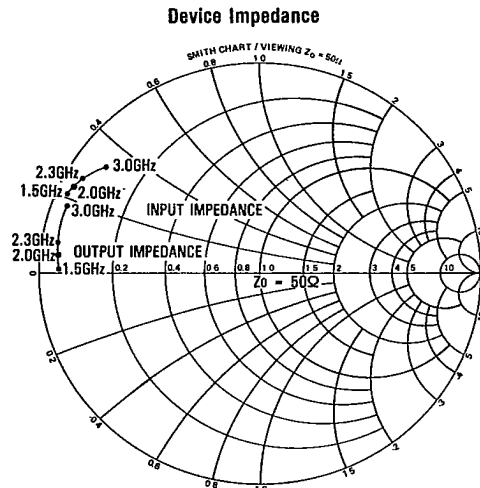
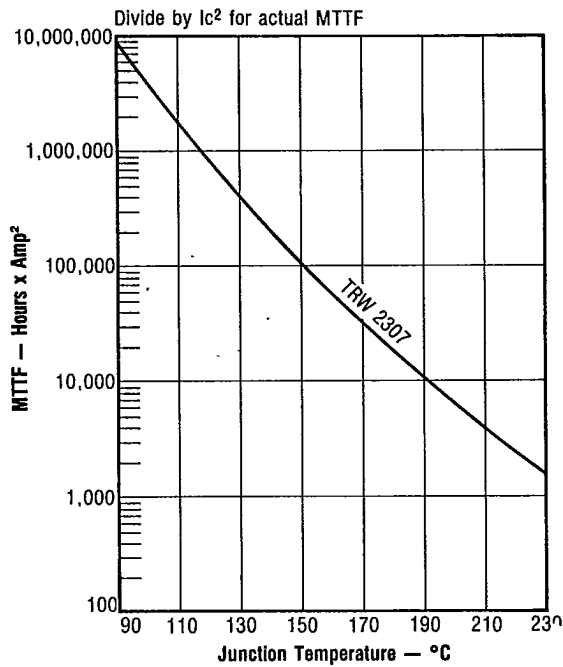
Electrical Characteristics ($T_{\text{range}} = 25^\circ\text{C}$)

	Symbol	Characteristics	Condition	Value
DC Tests	BVCES	Collector-Emitter Breakdown Voltage	$I_C = 50 \text{ mA}$	42 V Min
	BVEBO	Emitter-Base Breakdown Voltage	$I_E = 1.0 \text{ mA}$	3.5 V Min
	I_{CBO}	Collector Cutoff Current	$V_{CB} = 22 \text{ V}$ $V_{CB} = 38 \text{ V}$	1.25 mA 5 mA
	h_{FE}	Forward Current Transfer Ratio	$V_{CE} = 5 \text{ V}$ $I_C = 500 \text{ mA}$	10-120
RF Tests	C_{OB}	Collector-Base Capacitance (Max)	$V_{CB} = 22 \text{ V}$ $f = 1 \text{ MHz}$	10 pF
	P_o	Power Output	$f = 2.3 \text{ GHz}$ $V_{CE} = 20 \text{ V}$	7.0 W Min
	P_{gain}	Power Gain (dB)	$f = 2.3 \text{ GHz}$ $P_o = 7.0 \text{ W}$ $V_{CE} = 20 \text{ V}$	8.0 dB Min
	VSWR	Mismatch Tolerance	$P_o = 7.0 \text{ W}$ $f = 2.3 \text{ GHz}$ $V_{CE} = 20 \text{ V}$	∞
	η_C	Collector Efficiency	$P_o = 7.0 \text{ W}$ $f = 2.3 \text{ GHz}$ $V_{CE} = 20 \text{ V}$	40 % Min
Operating	$T \ \& \ T_{\text{sig}}$	Max Junction and Storage Temperature	— 65 to + 200 °C	
	θ_{JF}	Thermal Resistance	$P_o = 7 \text{ W}, f = 2.3 \text{ GHz}$	8.5 °C/W
	I_C	Continuous Collector Current	$V_{CE} = 5 \text{ V}$	2.5 A Max

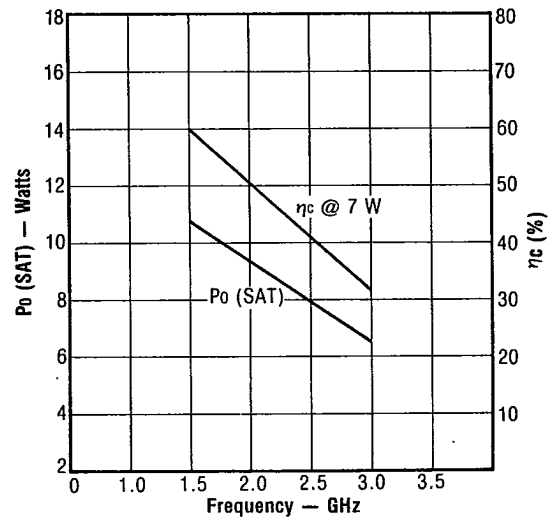
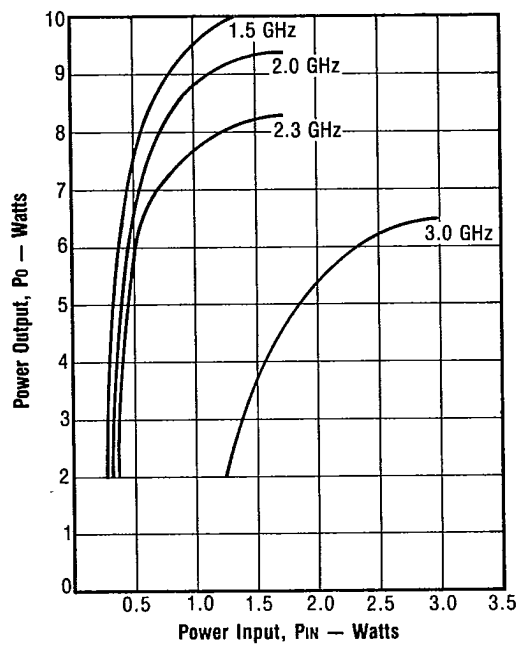
RF Devices Division, TRW Electronic Components Group, 14520 Aviation Blvd., Lawndale, CA 90260 213.536.0888

TRW 2307

T. 33-09

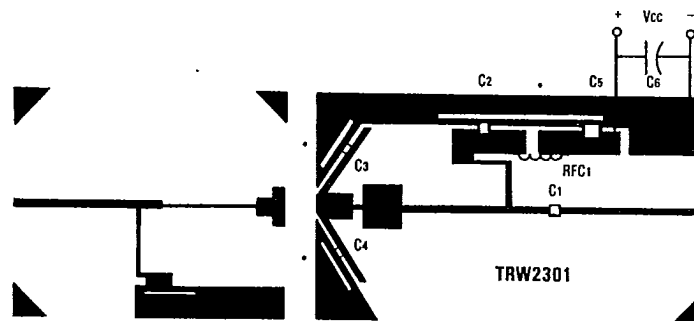


Note: Test circuit details are available from TRW Semiconductors.

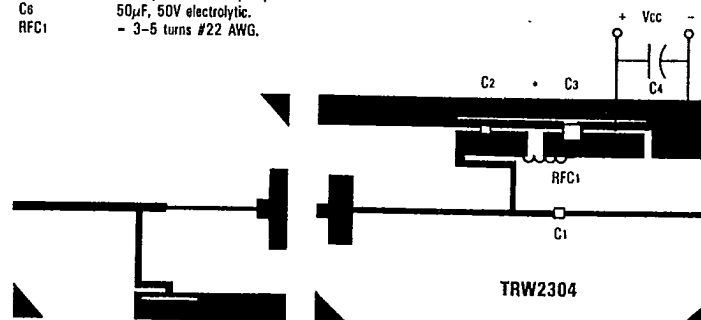


TRW2300 Series

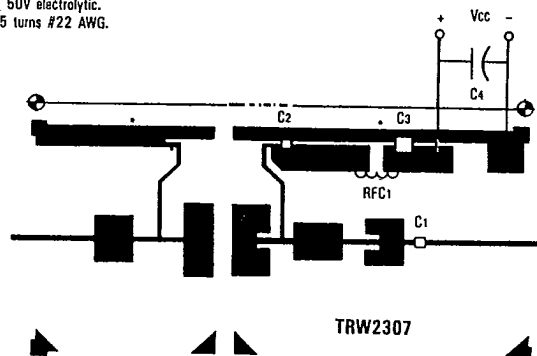
T-33-09



*Ground to backside of board
 Board material: 0.018" dielectric thickness teflon fiberglass.
 C1, C2, C3, C4 = 100pF porcelain chip caps.
 C5 = 0.1μF ceramic chip cap.
 C6 = 50μF, 50V electrolytic.
 RFC1 = 3-5 turns #22 AWG.



*Ground to backside of board
 Board material: 0.018" dielectric thickness teflon fiberglass.
 C1, C2 = 100pF porcelain chip caps.
 C3 = 0.1μF ceramic chip cap.
 C4 = 50μF, 50V electrolytic.
 RFC1 = 3-5 turns #22 AWG.



*Ground to backside of board
 Board material: 0.018" dielectric thickness teflon fiberglass.
 C1, C2 = 100pF porcelain chip caps.
 C3 = 0.1μF ceramic chip cap.
 C4 = 50μF, 50V electrolytic.
 RFC1 = 3-5 turns #22 AWG.