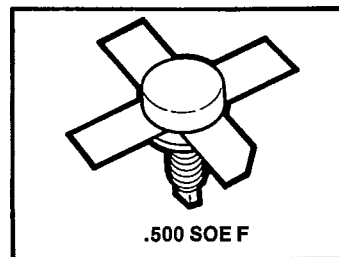




**PT9790**

**SSB Power Transistor**

- 150 Watts (PEP)
- 50 Vcc
- 2 to 30 MHz
- Gold Metallized
- ∞ VSWR
- Diffused Ballast Resistors
- Class A, AB and C Operation
- High Gain
- Common Emitter
- Isolated Packages

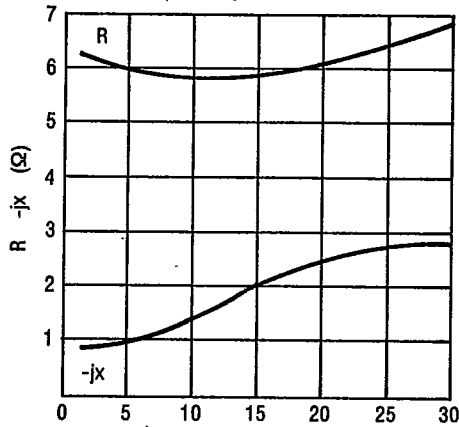


**Electrical Characteristics (25°C)**

	SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
DC TEST	BVCBO	Collector-Base Breakdown	Ic = 100mA	110			V
	BVCEO	Collector-Emitter Breakdown	Ic = 50mA	55			V
	BVEBO	Emitter-Base Breakdown	IE = 5mA	4.0			V
	hFE	D.C. Current Gain	VCE = 5V, Ic = 1A	10		60	
	ΔhFE	Matched Pairs	VCE = 5V, Ic = 1A			Δ 5	
RF TEST	Po	Power Gain	VCE = 50V, Ico = 50mA f = 28MHz, POUT = 150W	15			dB
	IMD	Intermodulation Distortion	VCE = 50V, f = 28MHz POUT = 150W PEP, Ico = 50mA			-32	dB
	VSWR	Mismatch Tolerance	VCE = 50V, f = 28MHz POUT = 150W PEP, Ico = 50mA	∞			
	COB	Output Capacitance	Vcb = 28Vdc, f = 1.0MHz		200		pF
MAX. RATINGS	Ic MAX	Collector Current	Tc = 25°C			15	A
	θjc	Thermal Resistance, Junction - Case				0.5	°C/W
	TJ MAX	Junction Temperature				200	°C
	TSTG	Storage Temperature				+150	°C
	PD MAX	Total Dissipation	Tc = 25°C			300	W

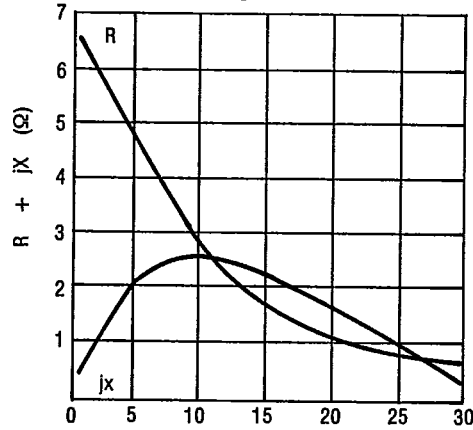
PT9790 T-33-15

**Series Load Impedance Vs. Frequency**



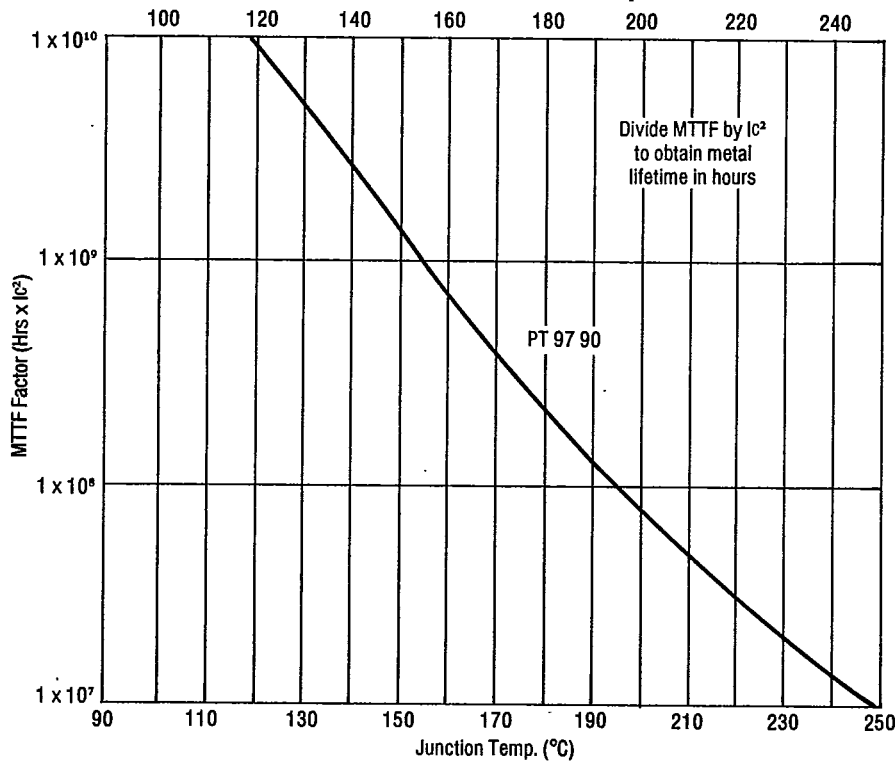
V<sub>CC</sub> = 50V  
I<sub>C(O)</sub> = 100mA  
P<sub>OUT</sub> = 150W CW

**Series Input Impedance Vs. Frequency**



V<sub>CC</sub> = 50V  
I<sub>C(O)</sub> = 100mA  
P<sub>OUT</sub> = 150W CW

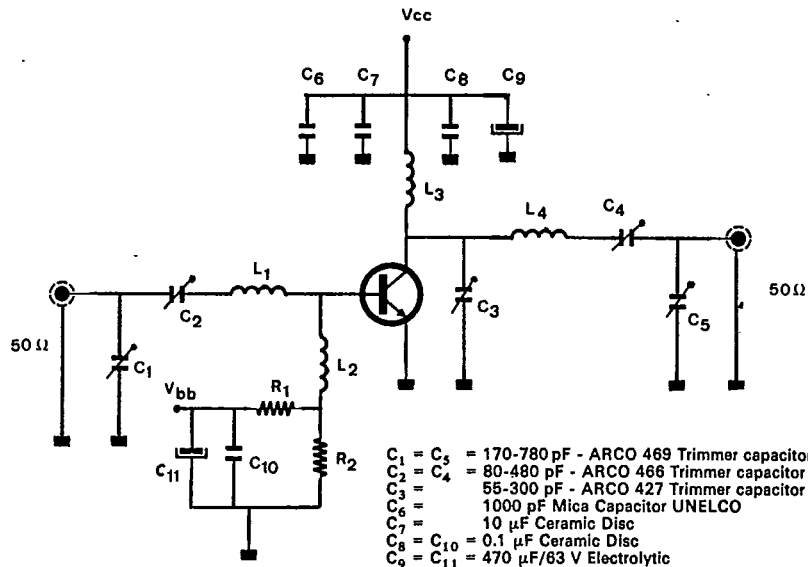
**MTTF Factor vs. Junction Temperature**



PT9790

T-33-15

28 MHz TEST CIRCUIT



- C<sub>1</sub> = C<sub>5</sub> = 170-780 pF - ARCO 469 Trimmer capacitor
- C<sub>2</sub> = C<sub>4</sub> = 80-480 pF - ARCO 466 Trimmer capacitor
- C<sub>3</sub> = 55-300 pF - ARCO 427 Trimmer capacitor
- C<sub>6</sub> = 1000 pF Mica Capacitor UNELCO
- C<sub>7</sub> = 10 μF Ceramic Disc
- C<sub>8</sub> = C<sub>10</sub> = 0.1 μF Ceramic Disc
- C<sub>9</sub> = C<sub>11</sub> = 470 μF/63 V Electrolytic

- L<sub>1</sub> = 6 turns 15/10 mm Silvered wire - 10 mm I.D. - 25 mm length
- L<sub>2</sub> = 10 turns 8/10 mm Enamelled wire - 10 mm I.D.
- L<sub>3</sub> = 4 turns 12/10 mm Enamelled wire - 10 mm I.D. - 10 mm length
- L<sub>4</sub> = 7 turns 15/10 mm Enamelled wire - 10 mm I.D. - 20 mm length

- R<sub>1</sub> = 1 Ω - 2 W
- R<sub>2</sub> = 2.7 Ω - 2 W

.500 SOEF

