

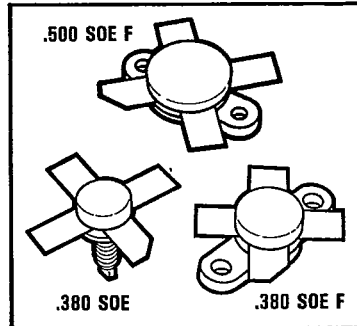
RF Devices Division  
TRW Electronic Components Group



## PT9784/A, PT9785

### SSB Power Transistors

- 75 to 100 Watts (PEP)
- 13.5 Vcc
- 2 to 30 MHz
- Class A & AB Operation
- Diffused Ballast Resistors
- High Gain
- Common Emitter
- Isolated Packages
- $\infty$  VSWR
- Linear Capability



#### Electrical Characteristics (TCASE = 25°C)

Symbol	Characteristics	Test Conditions	PT9784/A	PT9785	Unit
BVCBO	Collector-Base Breakdown Voltage	Ic = 100mA	40	40	V Min.
BVEBO	Emitter-Base Breakdown Voltage	Ie = 6mA, Ic = 10mA	4.0	4.0	V Min.
ICES	Collector-Emitter Cutoff Current	VCE = 13.5V	10	20	mA Max.
hFE	DC Current Gain	VCE = 5V, IA, 2A	25-150	20-100	—
ΔhFE	Matched Pairs	Ic = 1A, 2A	Δ5	Δ5	—
POUT	Output Power PEP	VCE = 13.5V, f = 28MHz	75	100	W PEP
PG	Power Gain	VCE = 13.5V, f = 28MHz POUT = Rated PEP	15	13	dB Min.
IMD	Typical Intermodulation Distortion	VCE = 13.5V, f = 28MHz POUT = Rated PEP	-32	-32	dB Typ.
VSWR	Mismatch Tolerance	VCE = 13.5V, f = 28MHz POUT = Rated PEP	$\infty$	$\infty$	—

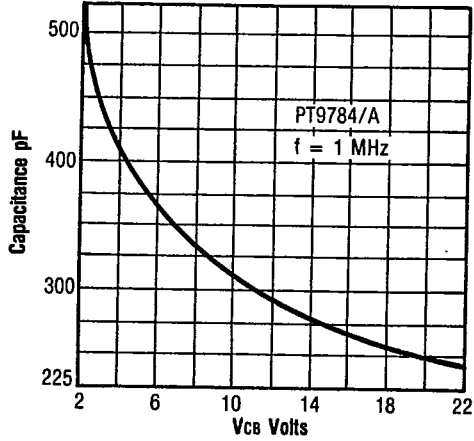
#### Absolute Maximum Ratings (TCASE = 25°C)

Part Number	Vcbo Volts	Vceo Volts	Vebo Volts	Ic Max Amps	Pt W	θJC °C/W	TSTORAGE °C
PT9784	40	20.0	4.0	15.0	200	0.87	-65 to 150
PT9784/A	40	20.0	4.0	15.0	175	1.75	-65 to 150
PT9785	40	20.0	4.0	25.0	350	0.5	-65 to 150

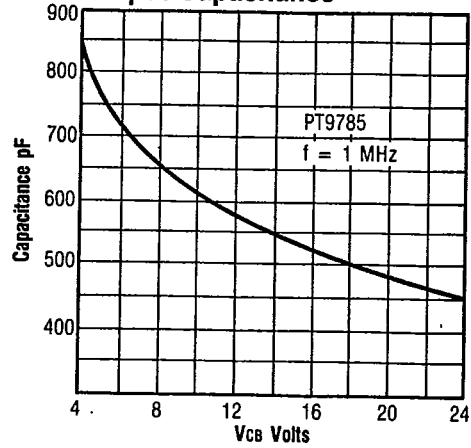
The "A" suffix on part number denotes stud package.

**PT9784/A, PT9785** T-33-13

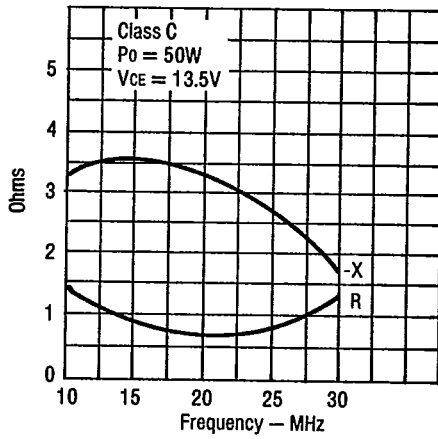
**Output Capacitance**



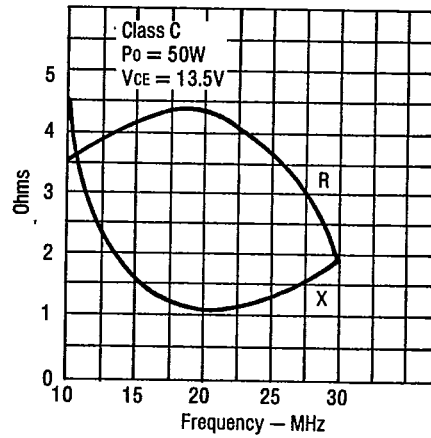
**Output Capacitance**



**Series Input Impedance** PT9784/A



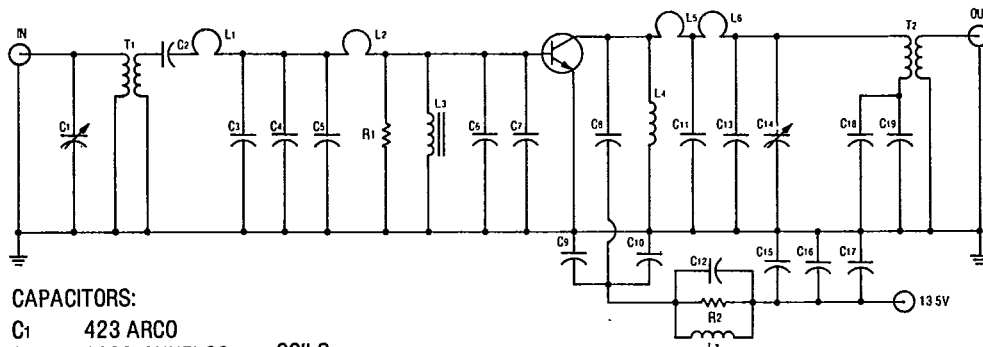
**Series Load Impedance**



## PT9784/A, PT9785

T-33-13

## PT9784 HF 28MHz 13.5 Volts TF 206



## CAPACITORS:

C1	423 ARCO
C2,3,4,6	1000pf UNELCO
7,9,10,13	
18,19	
C5	500pf UNELCO
C8	400pf UNELCO
C11	250pf UNELCO
C12,15	.1 Disc.
C14	469 ARCO
C16	.01 Disc.
C17	25 MFD, 35 Volts

## RESISTORS:

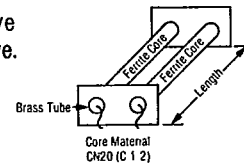
R1	51 Ohms
R2	16 Ohms 2W

## COILS:

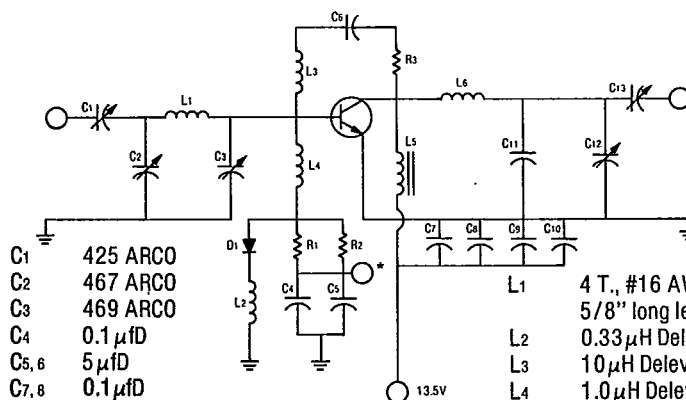
L1	#18 AWG., 1-3/8" Long, Looped 3/8" Curve
L2	#18 AWG., 1-1/8" Long, Looped 1/4" Curve.
L3	2-1/2 T., #24 AWG., Looped thru Ferroxcube VK21107-3B
L4	8 T., #18 AWG., .2 I.D., 5/8" Long
L5	#18 AWG., 1/4" Long, straight
L6	#18 AWG., 1/2" Long, Looped 3/8" Curve.
L7	10 T., #20 AWG., Enamel, Wrapped around 16 Ohm, 2 Watt resistor.

## TRANSFORMERS:

T1	Primary - 4 T., #22 AWG. Teflon insulated. Secondary - Brass Tube. Length - 11/16".
T2	Primary - Brass Tube. Secondary - 3 T., #22 AWG. Teflon insulated. Length - 1-1/4".



## PT9785 28MHz 13.5 Volts TF 210



C1	425 ARCO
C2	467 ARCO
C3	469 ARCO
C4	0.1 $\mu$ F
C5,6	5 $\mu$ F
C7,8	0.1 $\mu$ F
C9	100 $\mu$ F
C10	1000pf UNELCO
C11	100pf UNELCO
C12	466 ARCO
C13	427 ARCO

\*Note: Set voltage for 100ma idle collector current.

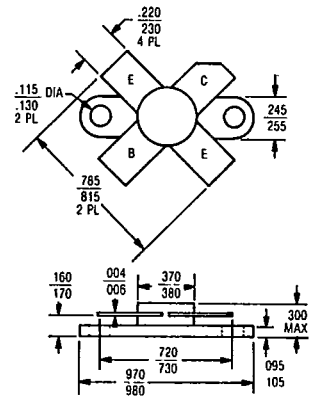
L1	4 T., #16 AWG., 7/16" I.D., 3/4" Long with 5/8" long lead on base side.
L2	0.33 $\mu$ H Delevan
L3	10 $\mu$ H Delevan
L4	1.0 $\mu$ H Delevan
L5	4 T., #20 wire wound on 2 Stackpole Carbon Co. Ferrite #9500 DO A723-1838.
L6	4 T., #10 AWG., 1/2" I.D., 1" long.
D1	Power diode
R1,2	2.7 Ohms
R3	51 Ohms 2W

PT9784/A, PT9785

T-33-13

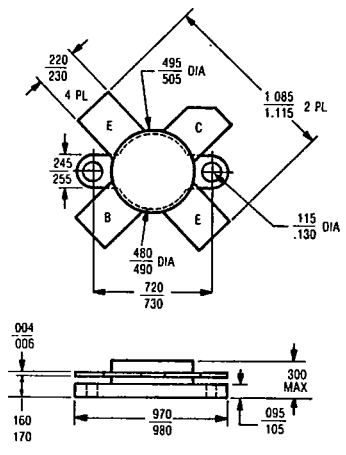
PT9784

.380 SOEF



PT9785

.500 SOEF



PT9784A

.380 SOE

