

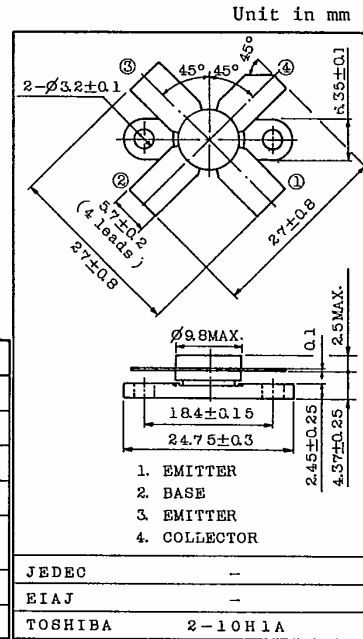
UHF BAND POWER AMPLIFIER APPLICATIONS.

## FEATURES:

- Output Power :  $P_o=12W(\text{Min.})$   
( $f=470\text{MHz}$ ,  $V_{CC}=12.6V$ ,  $P_i=3W$ )
- 100% Tested for Load Mismatch Stress at All Phase Angles with 30:1 VSWR @  $V_{CC}=12.6V$ ,  $P_i=3W$ ,  $f=470\text{MHz}$

MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CB0}$	35	V
Collector-Emitter Voltage	$V_{CE0}$	17	V
Emitter-Base Voltage	$V_{EB0}$	3.5	V
Collector Current	$I_C$	2.8	A
Collector Power Dissipation ( $T_c=25^\circ\text{C}$ )	$P_C$	30	W
Junction Temperature	$T_j$	175	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	165 ~ 175	$^\circ\text{C}$



Weight : 4g

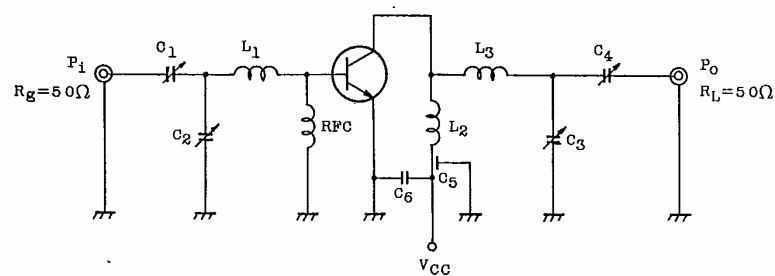
ELECTRICAL CHARACTERISTICS ( $T_c=25^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=15V$ , $I_E=0$	—	—	1.5	mA
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=2mA$ , $I_E=0$	35	—	—	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=10mA$ , $I_B=0$	17	—	—	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=0.2mA$ , $I_C=0$	3.5	—	—	V
DC Current Gain	$h_{FE}$	$V_{CE}=5V$ , $I_C=1.5A$	10	—	—	—
Collector Output Capacitance	$C_{ob}$	$V_{CB}=10V$ , $I_E=0$ , $f=1\text{MHz}$	—	—	45	pF
Output Power	$P_o$	(Fig.)	12	—	—	W
Power Gain	$G_{pe}$	$V_{CC}=12.6V$ , $f=470\text{MHz}$ , $P_i=3W$	7.7	—	—	dB
Collector Efficiency	$\eta_c$		60	—	—	%
Series Equivalent Input Impedance	$Z_{IN}$	$V_{CC}=12.6V$ , $f=470\text{MHz}$ , $P_o=12W$	—	$1.5+j1.3$	—	$\Omega$
Series Equivalent Output Impedance	$Z_{OUT}$		—	$3.6-j1.8$	—	$\Omega$

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# 2SC2380

Fig.  $f=470\text{MHz}$   $P_O$  TEST CIRCUIT



$C_1, C_3 : 1.5 \sim 5\text{pF}$

$C_2, C_4 : 2 \sim 15\text{pF}$

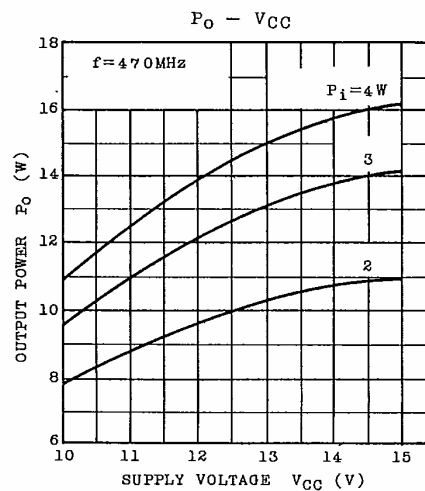
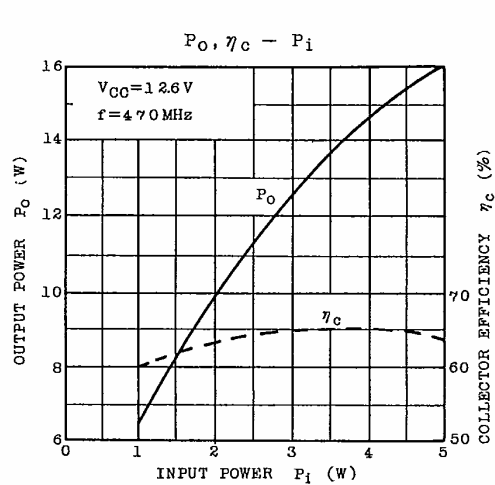
$C_5 : 1000\text{pF FEED THROUGH}$

$C_6 : 0.01\mu\text{F}$

$L_1, L_3 : 5\text{mm} \times 15\text{mm COPPER PLATE}$

$L_2 : \phi 1 \text{ SILVER PLATED COPPER WIRE, } 10\text{ID, } \frac{1}{2}\text{T}$

$\text{RFC} : \phi 1 \text{ ENAMEL COATED COPPER WIRE, } 3\text{ID, } 5\text{T}$



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