

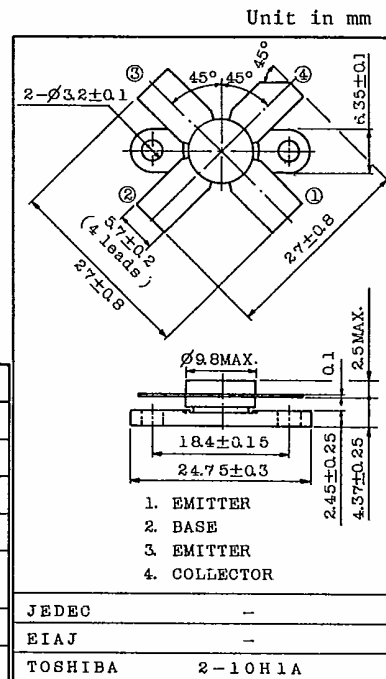
UHF BAND POWER AMPLIFIER APPLICATIONS.

## FEATURES:

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

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	35	V
Collector-Emitter Voltage	$V_{CEO}$	17	V
Emitter-Base Voltage	$V_{EBO}$	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	$^\circ\text{C}$



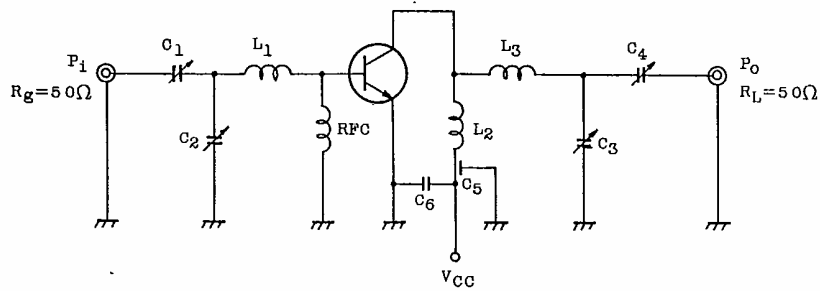
Weight : 4g

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

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

# 2SC2380

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



$C_1, C_3$  : 1.5 ~ 5pF

$C_2, C_4$  : 2 ~ 15pF

$C_5$  : 1000pF FEED THROUGH

$C_6$  : 0.01μF

$L_1, L_3$  : 5mm×15mm COPPER PLATE

$L_2$  : φ1 SILVER PLATED COPPER WIRE, 10ID, 1/2T

RFC : φ1 ENAMEL COATED COPPER WIRE, 3ID, 5T

