

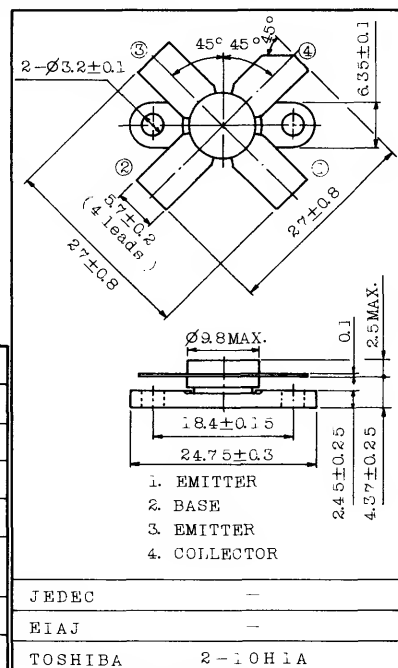
Unit in mm

UHF BAND POWER AMPLIFIER APPLICATIONS.

FEATURES:

. Output Power : $P_o=25W(\text{Min.})$ $(f=470\text{MHz}, V_{CC}=12.6V, P_i=10W)$. 100% Tested for Load Mismatch Stress at All Phase Angles with 30:1 VSWR @ $V_{CC}=12.6V, P_i=10W, f=470\text{MHz}$ 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	6	A
Collector Power Dissipation ($T_c=25^\circ\text{C}$)	P_C	50	W
Junction Temperature	T_j	175	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	$-65 \sim 175$	$^\circ\text{C}$



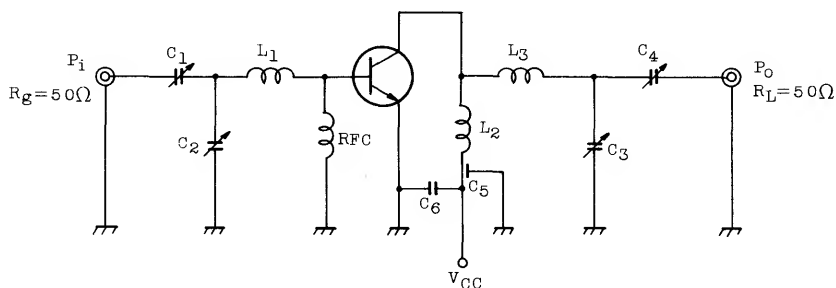
Weight : 4g

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	mA
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\text{mA}, I_E=0$	35	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=25\text{mA}, I_B=0$	17	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1\text{mA}, I_C=0$	3.5	-	-	V
DC Current Gain	h_{FE}	$V_{CE}=5V, I_C=3A$	10	-	-	-
Collector Output Capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1\text{MHz}$	-	-	80	pF
Output Power	P_o	(Fig.)	25	28	-	W
Power Gain	G_{pe}	$V_{CC}=12.6V, f=470\text{MHz},$	3.9	4.5	-	dB
Collector Efficiency	η_c	$P_i=10W$	60	-	-	%

2SC2381

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



C_1, C_3 : $1.5 \sim 2\text{pF}$

C_2, C_3 : $2.2 \sim 15\text{pF}$

C_5 : 1000pF FEED THROUGH

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

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

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

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

