

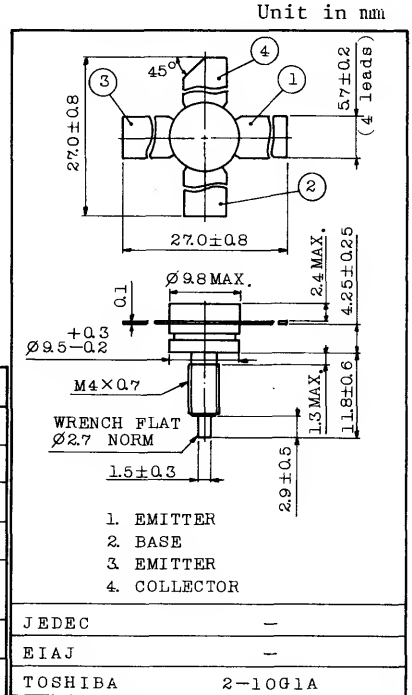
UHF BAND POWER AMPLIFIER APPLICATIONS.

FEATURES:

- Output Power : $P_o=6W(\text{Min.})$
($f=470\text{MHz}$, $V_{CC}=12.6V$, $P_i=1W$)
- 100% Tested for Load Mismatch Stress at All Phase Angles with 30:1 VSWR @ $V_{CC}=12.6V$, $P_o=6.5W$, $f=470\text{MHz}$

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	1.4	A
Collector Power Dissipation ($T_c=25^\circ\text{C}$)	P_C	15	W
Junction Temperature	T_j	175	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-65 ~ 175	$^\circ\text{C}$



Weight : 3.3g

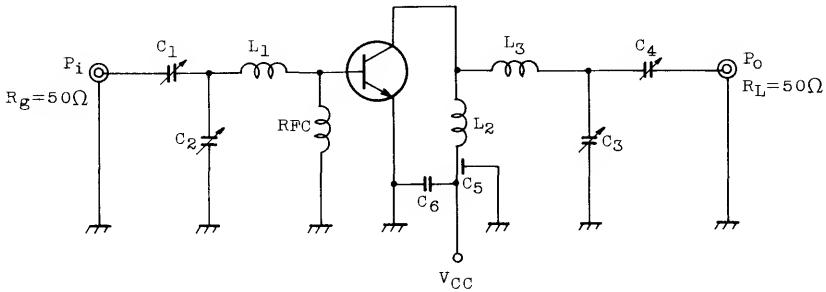
Mounting Kit No.AC57

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=15V$, $I_E=0$	-	-	1	nA
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}	$V_{CE}=5V$, $I_C=1A$	10	-	-	
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$, $I_E=0$, $f=1\text{MHz}$	-	-	25	pF
Output Power	P_o	(Fig.)	6	-	-	W
Power Gain	G_{pe}	$V_{CC}=12.6V$, $f=470\text{MHz}$,	7.7	-	-	dB
Collector Efficiency	η_c	$P_i=1W$	60	-	-	%
Series Equivalent Input Impedance	Z_{IN}	$V_{CC}=12.6V$, $f=470\text{MHz}$,	-	1.4+ j3.8	-	Ω
Series Equivalent Output Impedance	Z_{OUT}	$P_o=6W$	-	11.3- j2.5	-	Ω

2SC2105

Fig. f=470MHz P_O TEST CIRCUIT



C₁, C₃ : 1.5 ~ 5pF

C₂, C₄ : 2 ~ 15pF

C₅ : 1000pF FEEED THROUGH

C₆ : 0.01μF

L₁, L₃ : 5mm × 15mm COPPER PLATE

L₂ : φ1 SILVER PLATED COPPER WIRE, 10ID, ½T

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

