

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07478 DT-33-07

SILICON NPN EPITAXIAL PLANAR TYPE

2SC2101

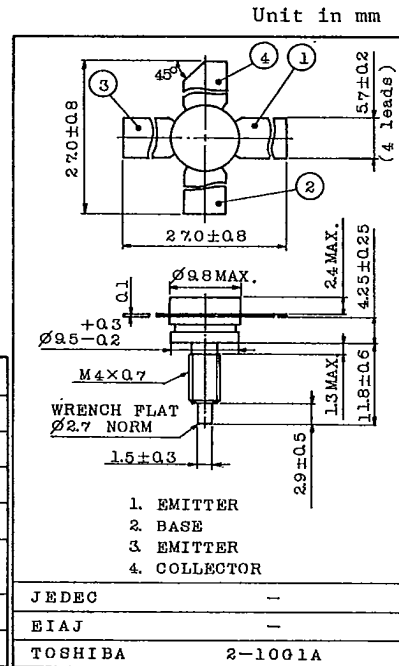
VHF BAND POWER AMPLIFIER APPLICATIONS.

FEATURES :

- Output Power : $P_O=6W$ (Min.)
($f=175MHz$, $V_{CC}=12.5V$, $P_i=0.5W$)

MAXIMUM RATINGS (Ta=25 °C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	35	V
Collector-Emitter Voltage	V_{CEO}	18	V
Emitter-Base Voltage	V_{EBO}	3.5	V
Collector Current	I_C	2	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}	$-65 \sim 175$	$^\circ\text{C}$



Mounting Kit No. AC57

Weight : 3.3g

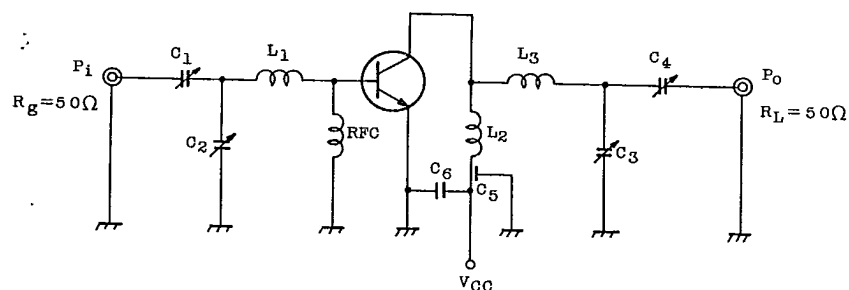
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=15V, I_E=0$	-	-	0.1	mA
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=1mA, I_E=0$	35	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	18	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1mA, I_C=0$	3.5	-	-	V
DC Current Gain	h_{FE}	$V_{CE}=5V, I_C=1A$	10	-	-	
Collector Output Capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$	-	-	25	pF
Output Power	P_o	(Fig.) $V_{CC}=12.5V, f=175MHz$ $P_i=0.5W$	6	7	-	W
Power Gain	G_{pe}		10.7	11.5	-	dB
Collector Efficiency	η_c		60	68	-	%
Series Equivalent Input Impedance	Z_{in}	$V_{CC}=12.5V, f=175MHz$ $P_o=6W$	-	1.1 -j0.5	-	Ω
Series Equivalent Output Impedance	Z_{OUT}		-	5.4 -j10	-	Ω

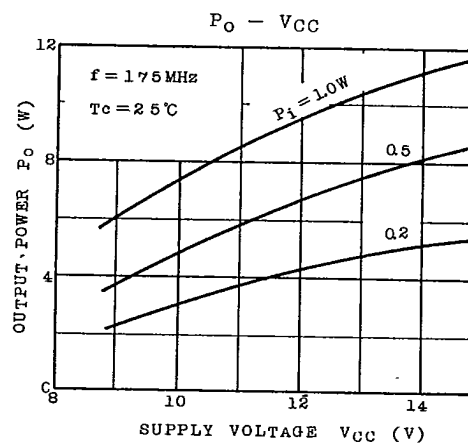
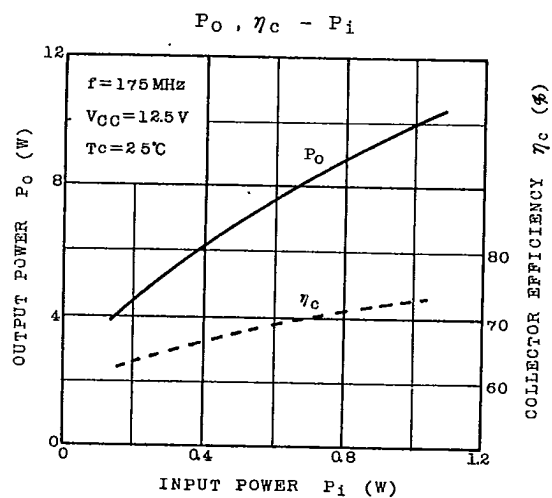
|||| TOSHIBA CORPORATION

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2SC2101Fig. P_O TEST CIRCUIT

- C_1 : 3 ~ 12pF
 C_2 : 5 ~ 20pF
 C_3, C_4 : 3.5 ~ 30pF
 C_5 : 1000pF FEED THROUGH
 C_6 : 0.01μF CERAMIC CONDENSER
 L_1, L_2 : φ1 SILVER PLATED COPPER WIRE, 6ID, 2T
 L_3 : φ1 SILVER PLATED COPPER WIRE, 6ID, 1T
 RFC : φ1 ENAMEL COATED COPPER WIRE, 6ID, 8T



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