

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07544

07-33-11

SILICON NPN EPITAXIAL PLANAR TYPE

2SC2508

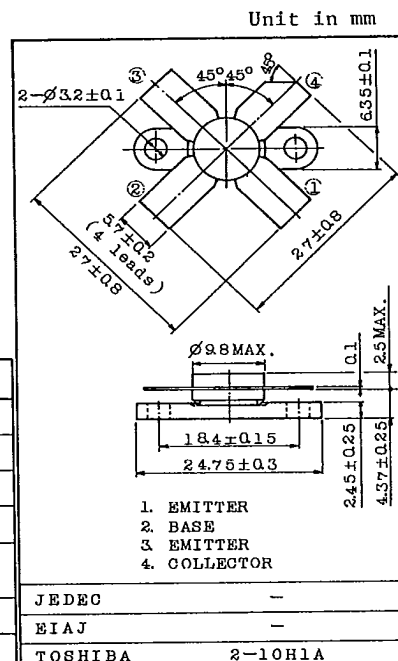
VHF BAND POWER AMPLIFIER APPLICATIONS.

FEATURES :

- Output Power : $P_o=27W$ (Min.)
($f=175MHz$, $V_{CC}=12.5V$, $P_i=4.2W$)

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	18	V
Emitter-Base Voltage	V_{EBO}	4	V
Collector Current	I_C	6	A
Collector Power Dissipation ($T_c=25^\circ C$)	P_C	50	W
Junction Temperature	T_j	175	$^\circ C$
Storage Temperature Range	T_{stg}	-65 ~ 175	$^\circ C$



Weight : 4.0g

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

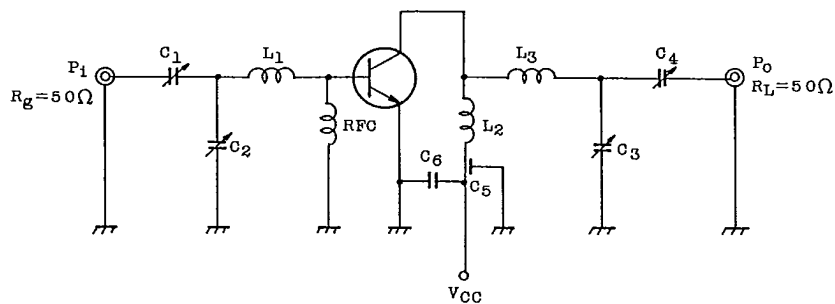
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=15V$, $I_E=0$	—	—	1	mA
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10mA$, $I_E=0$	40	—	—	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=25mA$, $I_B=0$	18	—	—	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1mA$, $I_C=0$	4	—	—	V
DC Current Gain	h_{FE}	$V_{CE}=5V$, $I_C=3A$	10	—	150	
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$, $I_E=0$, $f=1MHz$	—	—	80	pF
Output Power	P_o	(Fig.) $V_{CC}=12.5V$, $f=175MHz$, $P_i=4.2W$	27	29	—	W
Power Gain	G_{pe}		8.0	8.4	—	dB
Collector Efficiency	η_c		60	70	—	%

TOSHIBA CORPORATION

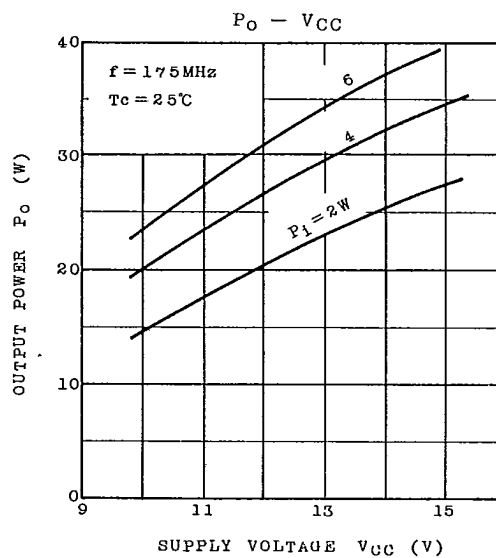
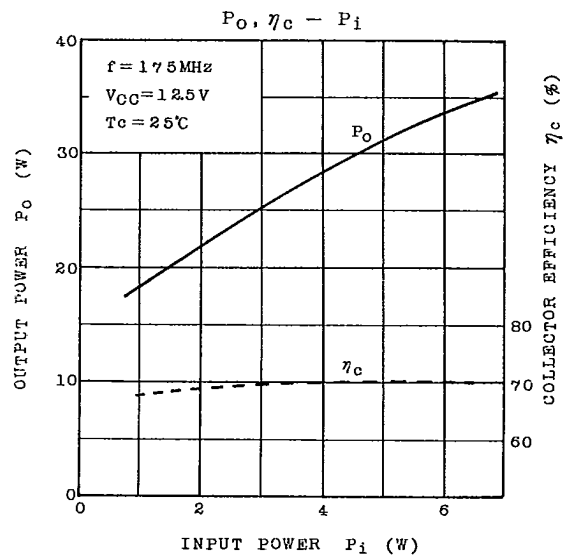
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Fig. P_O TEST CIRCUIT



C_1 : $\sim 20\text{pF}$ C_2, C_3, C_4 : $\sim 30\text{pF}$ C_5 : 1000pF FEED THROUGH
 C_6 : $0.01\mu\text{F}$
 L_1, L_3 : $\phi 1$ SILVER PLATED COPPER WIRE, 6ID, 1T
 L_2 : $\phi 1$ SILVER PLATED COPPER WIRE, 6ID, 2T
 RFC : $\phi 1$ ENAMEL COATED COPPER WIRE, 6ID, 8T



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