

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07532 DT-33-13

SILICON NPN EPITAXIAL PLANAR TYPE

2SC2420

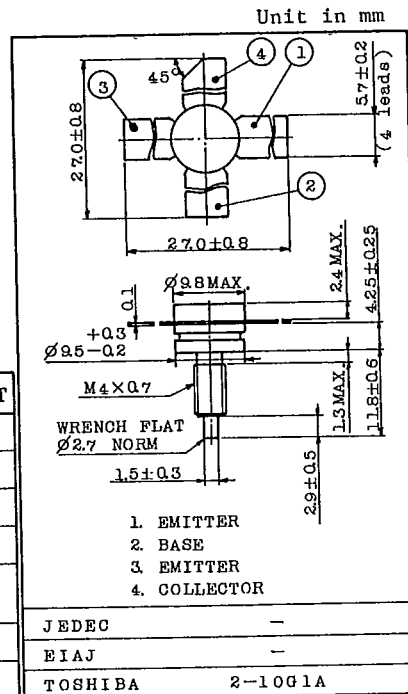
VHF BAND POWER AMPLIFIER APPLICATIONS.

FEATURES :

- Output Power : $P_o=32W$ (Min.)
($f=175MHz$, $V_{CC}=13.5V$, $P_i=4W$)
- 100% Tested for Load Mismatch Stress at All Phase Angles with 30:1 VSWR @ $V_{CC}=14.5V$, $P_i=4W$, $f=175MHz$

MAXIMUM RATINGS (Ta=25°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	70	W
Junction Temperature	T_j	175	°C
Storage Temperature Range	T_{stg}	-65 ~ 175	°C



Mounting Kit No. AC57
Weight : 3.3g

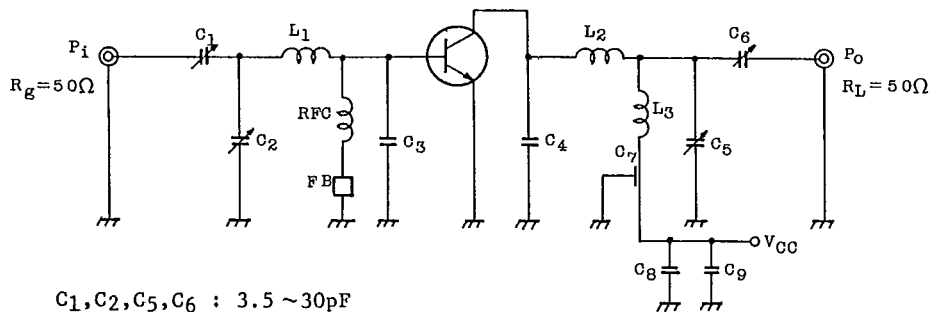
ELECTRICAL CHARACTERISTICS (Tc=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=15V, I_E=0$	-	-	2	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}	$V_{CE}=5V, I_C=5A$	10	-	-	
Collector Output Capacitance	C_{ob}	$V_{CB}=13.5V, I_E=0, f=1MHz$	-	110	160	pF
Output Power	P_o	(Fig.)	32	34	-	W
Power Gain	G_{pe}	$V_{CC}=13.5V, f=175MHz,$	9.0	9.3	-	dB
Collector Efficiency	η_c	$P_i=4W$	60	70	-	%
Series Equivalent Input Impedance	Z_{in}	$V_{CC}=13.5V, f=175MHz,$	-	0.9 +j1.1	-	Ω
Series Equivalent Output Impedance	Z_{OUT}	$P_o=32W$	-	2.0 -j0.4	-	Ω

TOSHIBA CORPORATION

2SC2420

Fig. P_o TEST CIRCUIT



- C₁, C₂, C₅, C₆ : 3.5 ~ 30pF
- C₃ : 72pF CERAMIC CONDENSER
- C₄ : 47pF CERAMIC CONDENSER
- C₇ : 1000pF FEED THROUGH
- C₈ : 0.01μF CERAMIC CONDENSER
- C₉ : 10μF
- L₁, L₂ : φ1 SILVER PLATED COPPER WIRE, 10ID, 1T
- L₃ : φ1 SILVER PLATED COPPER WIRE, 10ID, 2T
- RFC : φ1 ENAMEL COATED COPPER WIRE, 6ID, 10T
- FB : FERRITE BEADS

