

2~30MHz SSB LINEAR POWER AMPLIFIER APPLICATIONS.
(28V SUPPLY VOLTAGE USE)

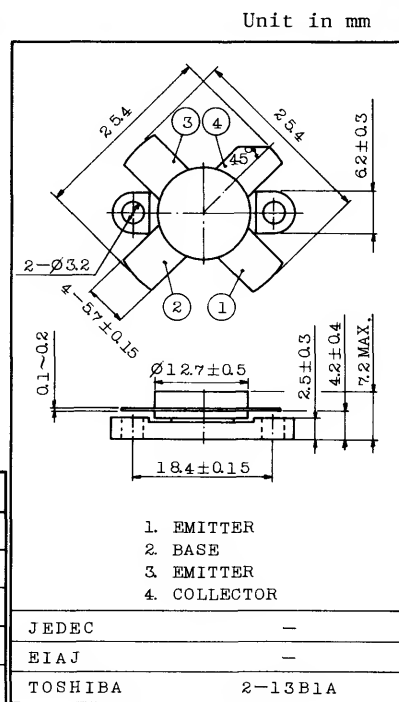
FEATURES:

. Specified 28V, 28MHz Characteristics

- : Output Power : $P_O=40W_{PEP}$
- : Minimum Gain : $G_{pe}=16dB$
- : Efficiency : $\eta_c=40\%$ (Min.)
- : Intermodulation Distortion : $IMD=-30dB$ (Max.)

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	65	V
Collector-Emitter Voltage	V_{CEO}	35	V
Emitter-Base Voltage	V_{EBO}	4	V
Collector Current	I_C	7	A
Collector Power Dissipation ($T_c=25^\circ C$)	P_C	80	W
Junction Temperature	T_j	175	$^\circ C$
Storage Temperature Range	T_{stg}	-65 ~ 175	$^\circ C$



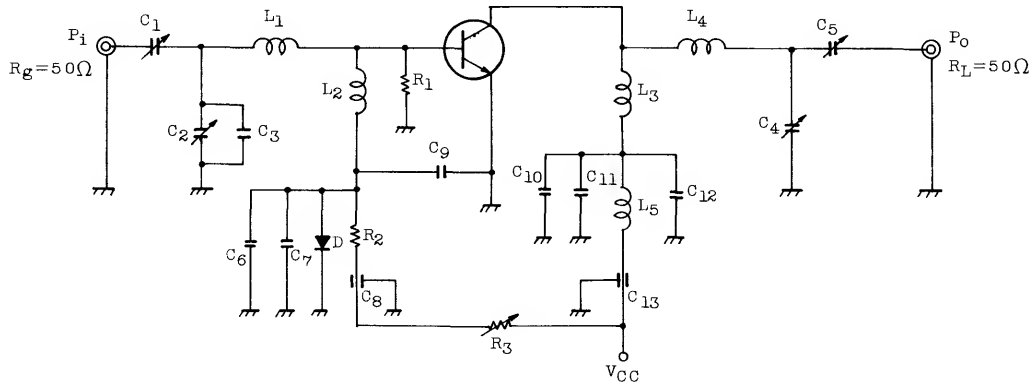
Weight : 5.2g

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=50mA, I_B=0$	35	—	—	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CER}$	$I_C=1mA, R_{BE}=10\Omega$	65	—	—	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10mA, I_C=0$	4	—	—	V
DC Current Gain	h_{FE}	$V_{CE}=10V, I_C=5A$	10	—	—	
Transition Frequency	f_T	$V_{CE}=15V, I_C=0.1A$	50	—	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=28V, I_E=0, f=1MHz$	—	110	150	pF
Power Gain	G_{pe}	$V_{CC}=28V, f=28MHz$	16	—	—	dB
Input Power	P_i	2-Tone, $\Delta f=1kHz$	—	—	1	W _{PEP}
Collector Efficiency	η_c	$I_{idle}=20mA, P_O=40W_{PEP}$	40	—	—	%
Intermodulation Distortion	IMD	(Fig.)	—	—	-30	dB

2SC1763

Fig. P_i TEST CIRCUIT



C_1, C_4, C_5 : $\sim 100\text{pF}$

C_2 : $\sim 50\text{pF}$

C_3 : 100pF

C_6, C_{10} : $0.1\mu\text{F}$

C_7, C_{12} : $22\mu\text{F}$

C_8, C_{13} : 6000pF FEED THROUGH

C_9 : $0.1\mu\text{F}$

C_{11} : $0.01\mu\text{F}$

R_1 : 10Ω , 1W

R_2 : 500Ω , 2W

R_3 : $\sim 200\Omega$

L_1 : $\phi 1.0$ SILVER PLATED COPPER WIRE,
12ID, 4T, 20 LENGTH

L_2 : $10\mu\text{H}$

L_3 : $\phi 1.6$ SILVER PLATED COPPER WIRE,
12ID, 2T, 8 LENGTH

L_4 : $\phi 1.6$ SILVER PLATED COPPER WIRE,
20ID, 3.5T, 22 LENGTH

L_5 : $10\mu\text{H}$

D : 1S1555

