

www.DataSheet4U.com

UHF BAND POWER AMPLIFIER APPLICATIONS.

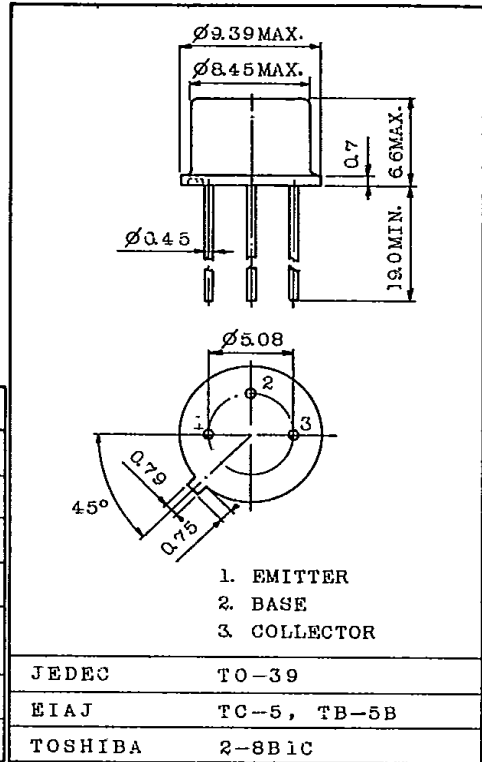
FEATURES:

- . Output Power : $P_o=0.9W(\text{Min.})$
($f=470\text{MHz}$, $V_{CC}=12.6V$, $P_i=0.3W$)
- . All Electrodes Insulated from Case.

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	20	V
Emitter-Base Voltage	V_{EBO}	4	V
Collector Current	I_C	0.5	A
Collector Power Dissipation ($T_c=25^\circ\text{C}$)	P_C	5	W
Junction Temperature	T_j	175	°C
Storage Temperature Range	T_{stg}	-65 ~ 175	°C

Unit in mm



Weight : 1.2g

ELECTRICAL CHARACTERISTICS (Ta=25°C)

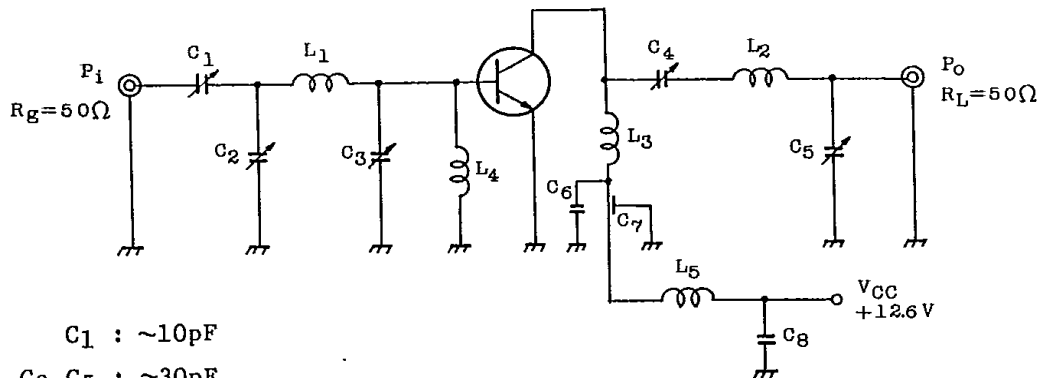
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=15V, I_E=0$	-	-	1	μA
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=1mA, I_E=0$	40	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	20	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1mA, I_C=0$	4	-	-	V
DC Current Gain	h_{FE}	$V_{CE}=5V, I_C=0.1A$	20	-	-	
Collector Output Capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1\text{MHz}$	-	6.5	10	pF
Output Power	P_o	(Fig.)	0.9	1.0	-	W
Power Gain	G_{pe}	$V_{CC}=12.6V, f=470\text{MHz},$	4.7	5.2	-	dB
Collector Efficiency	η_c	$P_i=0.3W$	60	-	-	%

TOSHIBA CORPORATION

2SC1165

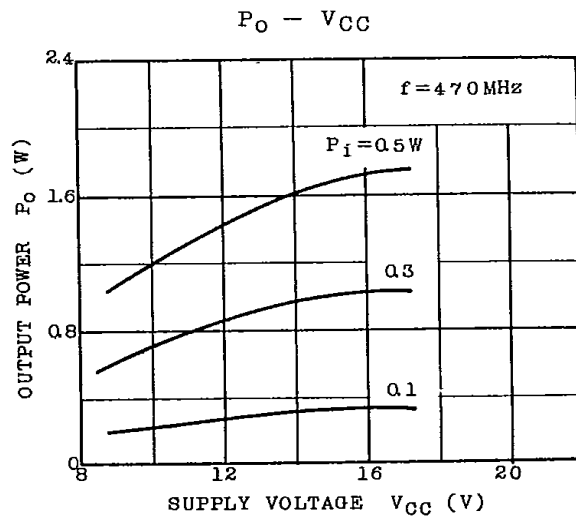
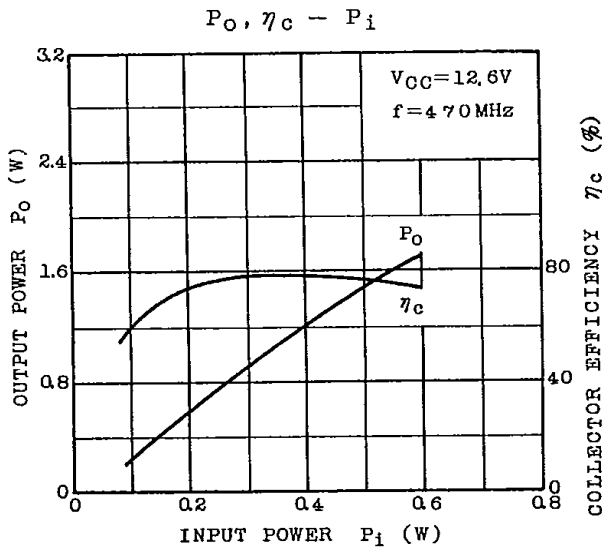
www.DataSheet4U.com

Fig. f=470MHz P_O TEST CIRCUIT



- C₁ : ~10pF
- C₂, C₅ : ~30pF
- C₃, C₄ : ~25pF
- C₅, C₈ : 0.01μF
- C₇ : 1000pF

- L₁ : φ0.8 SILVER PLATED COPPER WIRE, 6ID, 2T
- L₂ : φ1 SILVER PLATED COPPER WIRE, 25 LENGTH, STRAIGHT
- L₃ : φ1 SILVER PLATED COPPER WIRE, 20 LENGTH, STRAIGHT
- L₄, L₅ : RFC



TOSHIBA CORPORATION