

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07456 07-33-07

SILICON NPN EPITAXIAL PLANAR TYPE

2SC1678

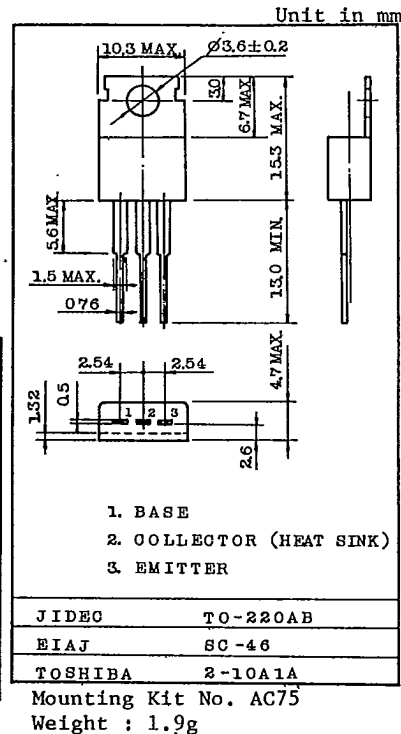
27 MHz POWER AMPLIFIER APPLICATIONS.

FEATURES:

- Recommended for Output Stage Application of AM 4W Transmitter.
- High Power Gain.

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V _{CBO}	65	V
Collector-Emitter Voltage R _{BE} =10Ω	V _{CER}	65	V
Emitter-Base Voltage	V _{EBO}	4.0	V
Collector Current	I _C	3	A
Base Current	I _B	0.4	A
Emitter Current	I _E	-3	A
Collector Power Dissipation (T _c =25°C)	P _C	10	W
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{stg}	-55 ~ 150	°C



ELECTRICAL CHARACTERISTICS (Ta=25°C)

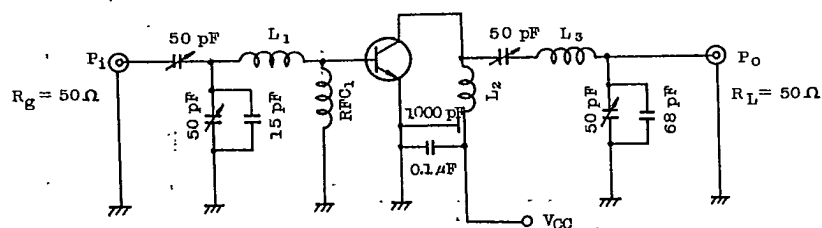
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I _{CBO}	V _{CB} =30V, I _C =0	-	-	10	μA
Collector Cut-off Current		I _{CEO}	V _{CE} =20V, I _B =0	-	-	100	μA
Breakdown Voltage	Collector-Base	V(BR) _{CBO}	I _C =1.0mA, I _E =0	65	-	-	V
	Collector-Emitter	V(BR) _{CER}	I _C =10mA, R _{BE} =10Ω	65	-	-	
	Emitter-Base	V(BR) _{EBO}	I _E =1.0mA, I _C =0	4.0	-	-	
DC Current Gain		h _{FE} (1)	V _{CE} =5V, I _C =0.5A (Note)	15	-	-	
		h _{FE} (2)	V _{CE} =5V, I _C =1.5A (Note)	10	-	-	
Collector Emitter Saturation Voltage		V _{CE(sat)}	I _C =0.5A, I _B =0.05A	-	0.5	1.0	V
Transition Frequency		f _T	V _{CE} =5V, I _C =100mA	100	-	-	MHz
Collector Output Capacitance		C _{ob}	V _{CB} =10V, I _E =0, f=1MHz	-	30	45	pF
Output Power Fig.		P _o	V _{CC} =12V, P _i =0.4W I _{DC} =415mA(Typ.), f=27MHz	3.0	-	-	W

Note : Pulse Test : Pulse Width ≤ 300μs, Duty Cycle ≤ 2.0%

TOSHIBA CORPORATION

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2SC1678Fig. P₀ TEST CIRCUIT

- L₁ : ∅ 0.5 mm ENAMEL COATED COPPER WIRE, 7 T, 8 mm I.D.
 L₂ : ∅ 0.5 mm ENAMEL COATED COPPER WIRE, 5 T, 8 mm I.D.
 L₃ : ∅ 0.3 mm ENAMEL COATED COPPER WIRE, 18 T, 6 mm I.D.
 RFC₁ : ∅ 0.2 mm ENAMEL COATED COPPER WIRE, 76 T, 5 mm I.D.

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