

Fax-on-Demand: 86-22-24207687 / 25-471-1126

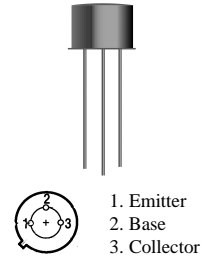
Tel-on-Demand: 86-22-24207688 / 25-471-1136

Before ordering check with
factory for most current data

672-3866 / 672-3866A
RF & MICROWAVE TRANSISTORS
LOW POWER TRANSISTORS

Features

- Silicon NPN, To-39 packaged VHF/UHF Transistor
- Specified 400 MHz, 28Vdc Characteristics
 - Output Power = 1.0 Watt
 - Minimum Gain = 10 dB
 - Efficiency = 45%
- 800 MHz Current-Gain Bandwidth Product



TO-39

DESCRIPTION:

Silicon NPN transistor, designed for VHF and UHF equipment. Applications include amplifier; pre-driver, driver, and output stages. Also suitable for oscillator and frequency-multiplier functions.

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C)

Symbol	Parameter	Value	Unit
V _{CEO}	Collector-Emitter	30	Vdc
V _{CBO}	Collector-Base Voltage	55	Vdc
V _{EBO}	Emitter-Base Voltage	3.5	Vdc
I _c	Collector Current	400	mA

Thermal Data

P _D	Total Device Dissipation Derate above 25°C	5.0 28.6	Watts mW/ °C
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FUNCTIONAL

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
G_{PE}	Power Gain	Test Circuit-Figure 1 Pin = 0.1 W, VCE = 28Vdc f = 400 MHz, TC = 25 C	10	-	-	dB
P_{out}	Output Power	Test Circuit-Figure 1 Pin = 0.1 W, VCE = 28Vdc f = 400 MHz, TC = 25 C	1.0	-	-	Watts
η_c	Collector Efficiency	Test Circuit-Figure 1 Pin = 0.1 W, VCE = 28Vdc f = 400 MHz, TC = 25 C	45	-	-	%

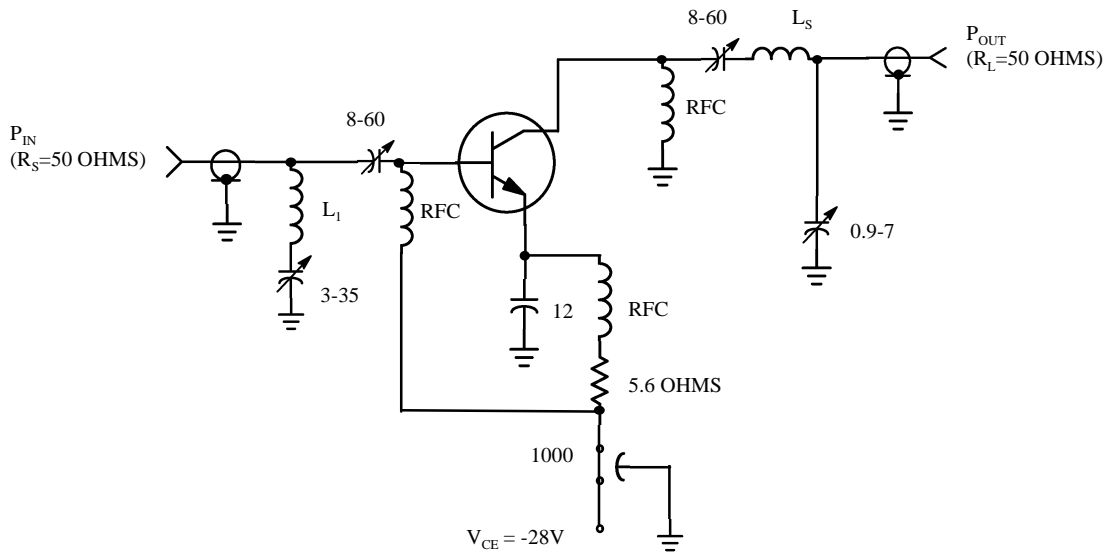


Figure 1 - 400 MHz RF AMPLIFIER CIRCUIT FOR G_{PE} , P_{OUT} , AND EFFICIENCY SPECIFICATIONS.

L_1 : 2 TURNS No. 18 wire, 1/4" ID, 1/8" long

L_s : 2 3/4 TURNS No. 18 wire, 1/4" ID, 3/16" long

Capacitor values in pF unless
otherwise indicated.

Tuning capacitors are air variable

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RF Low Power PA, LNA, and General Purpose Discrete Selector Guide

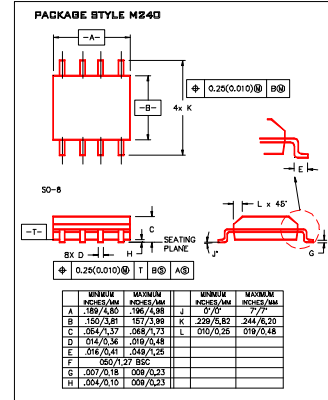
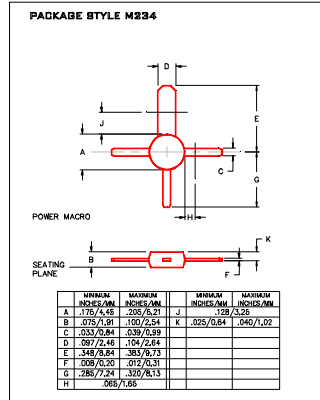
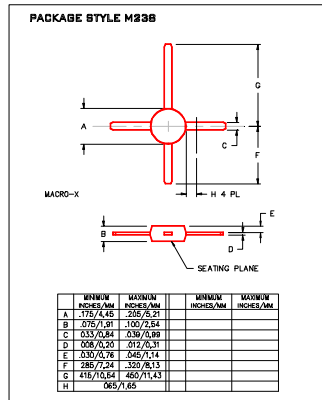
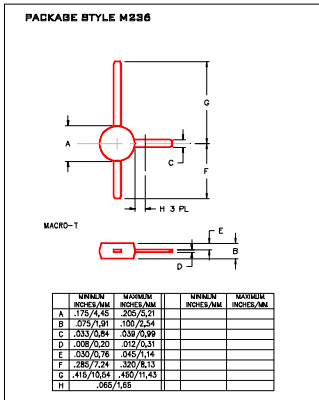
Package	Device	Type	GPE Freq (MHz)	Pout	GPE (dB)	Efficiency (%)	GPE VCC	BVCEO	IC max (mA)
SO-8	672-4427, R2	NPN	175	0.15	18	60	12	20	400
TO-39	672-4427	NPN	175	1	10	50	12	20	400
POWER MACRO	672-553	NPN	175	1.5	11.5	60	12.5	16	500
POWER MACRO	672-553T	NPN	175	1.5	11.5	50	12.5	16	500
TO-39	672-607	NPN	175	1.75	11.5	50	12.5	16	330
TO-39	672-6255	NPN	175	3	7.8	50	12.5	18	1000
TO-72	672-5179	NPN	200		20		6	12	50
MACRO X	672-559	NPN	512	0.5	10	65	7.5	16	150
MACRO X	672-559	NPN	512	0.5	13	60	12.5	16	150
TO-39	672-3866A	NPN	400	1	10	45	28	30	400
SO-8	672-3866, R1, R2	NPN	400	1	10	45	28	30	400
POWER MACRO	672-555	NPN	470	1.5	11	50	12.5	16	400
POWER MACRO	672-555T	NPN	470	1.5	11	50	12.5	16	400
MACRO X	672-559	NPN	870	0.5	6.5	70	7.5	16	150
MACRO X	672-559	NPN	870	0.5	9.5	65	12.5	16	150
SO-8	672-8372,R1,R2	NPN	870	0.75	8	55	12.5	16	200
POWER MACRO	672-557	NPN	870	1.5	8	55	12.5	16	400
POWER MACRO	672-557T	NPN	870	1.5	8	55	12.5	16	400

Package	Device	Type	Freq (MHz)	NF (dB)	NF IC (mA)	NF VCE	GNF (dB)	Gu Max (dB)	Ftau (MHz)	Ccb(pF)	BVCEO	IC max (mA)	
TO-39	672-5109	NPN	200	3	10	1		12	1200	3.5	2	400	
TO-39	672-5943C	NPN	200	3.4	30	15		11.4	1000			30	400
SO-8	672-5943, R1, R2	NPN	200	3.4	30	15		15	1300			30	400
TO-72	672-5179	NPN	200	4	1	2		17	900	1	1	50	50
TO-72	672-2857	NPN	300	5	50	4		13	1600	1	1	4	4
TO-39	672-517	NPN	300	7.5	50	15		5.5	4600	3	25	150	150
TO-72	672-904	NPN	450	1.5	5	6		11	4000	1	15	30	30
TO-72	672-6304	NPN	450	5	2	5		14	1400	1	1	50	50
MACRO T	672-R91	NPN	500	1.9	2	3	11	16.5	5000	1	1	3	3
MACRO T	672-R96	NPN	500	2	14	10		14	50	2	1	10	10
SO-8	672-5812, R1, R2	NPN	500	2	50	10	15.5	17.8	5000			15	200
MACRO X	672-581A	NPN	500	2	50	10	14	15	5000			15	200
Macro	672-90	NPN	500	2.4	2	10	15	18	5000	1	15	30	30
TO-72	672-90	NPN	500	2.5	2	5		20	1300			15	50
TO-72	672-914	NPN	500	2.5	5	10		15	4500			12	40
MACRO X	672-581	NPN	500	2.5	50	10	15	17.8	5000			16	200
TO-39	672-586	NPN	500	3	90	15	11	14.5	4500	2.2	17	200	200
MACRO X	672-951	NPN	1000	1.3	5	6	14	17	8000	0.45	10	100	100
MACRO X	672-571	NPN	1000	1.5	10	6	14	10	8000	1	10	70	70
MACRO T	672-91	NPN	1000	2.5	2	5	8	11	5000	1	12	35	35
MACRO T	672-90	NPN	1000	3	2	10	10	12.5	5000	1	15	30	30
TO-39	672-545	PNP							14	1400	2	70	400
TO-39	672-544	NPN							13.5	1500		70	400

RF (Low Power PA / General Purpose) Selection

RF (LNA / General Purpose) Selection Guide

Low Cost RF Plastic Package Options



Macro T

Macro X

Power

SO-8

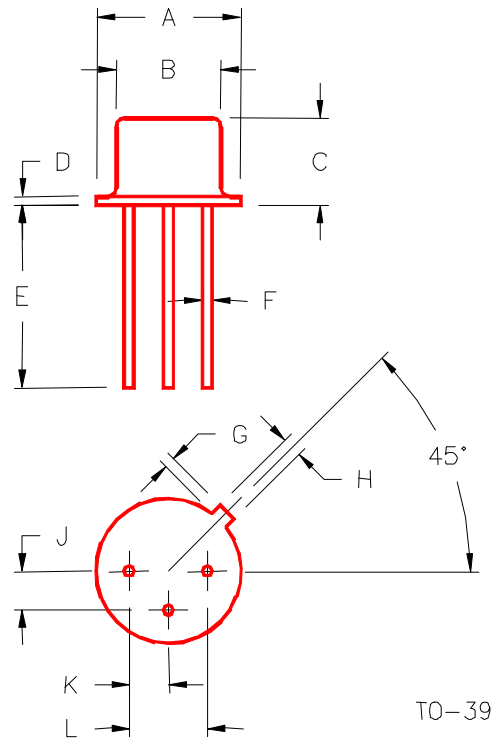
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PACKAGE STYLE M246



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.350/8,89	.370/9,40	J	.095/2,41	.105/2,67
B	.315/8,00	.335/8,51	K	.095/2,41	.105/2,67
C	.240/6,10	.260/6,60	L	.190/4,83	.210/5,33
D	.015/0,38	.045/1,14			
E	.500/12,70				
F	.016/0,41	.019/0,48			
G	.029/0,74	.040/1,02			
H	.028/0,71	.034/0,86			