



semiconductor
corporation

K5001
K5002 K5003

NPN
SILICON
TRANSISTOR

GENERAL DESCRIPTION

Double-diffused, NPN Silicon transistors designed for low-level, low-noise UHF and VHF amplifier applications. Exceptional performance in Converter and Oscillator circuitry in the UHF range.

A modified TO-72 package having a fourth lead connected to the case for grounding and shielding purposes is used. All active elements are isolated from the case.

ABSOLUTE MAXIMUM RATINGS

Maximum Temperatures

Operating Junction Temperature

200°C Maximum

Storage Temperature

-55°C to +200°C

Maximum Power Dissipation at 25°C Amb.

200mw

Maximum Voltages

V_{cb0} Collector to Base Voltage

25 Volts

V_{ce0} Collector to Emitter Voltage

12 volts

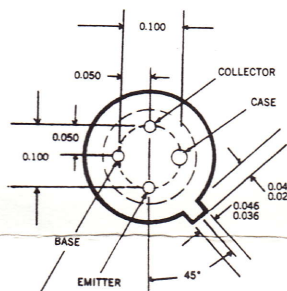
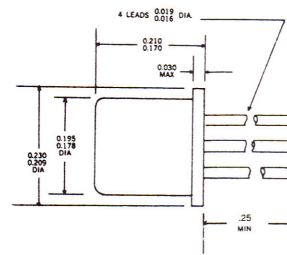
V_{eb0} Emitter to Base Voltage

2.5 volts

Derate:

1.72 mw/°C for 25°C Case

1.14 mw/°C for 25°C Amb.

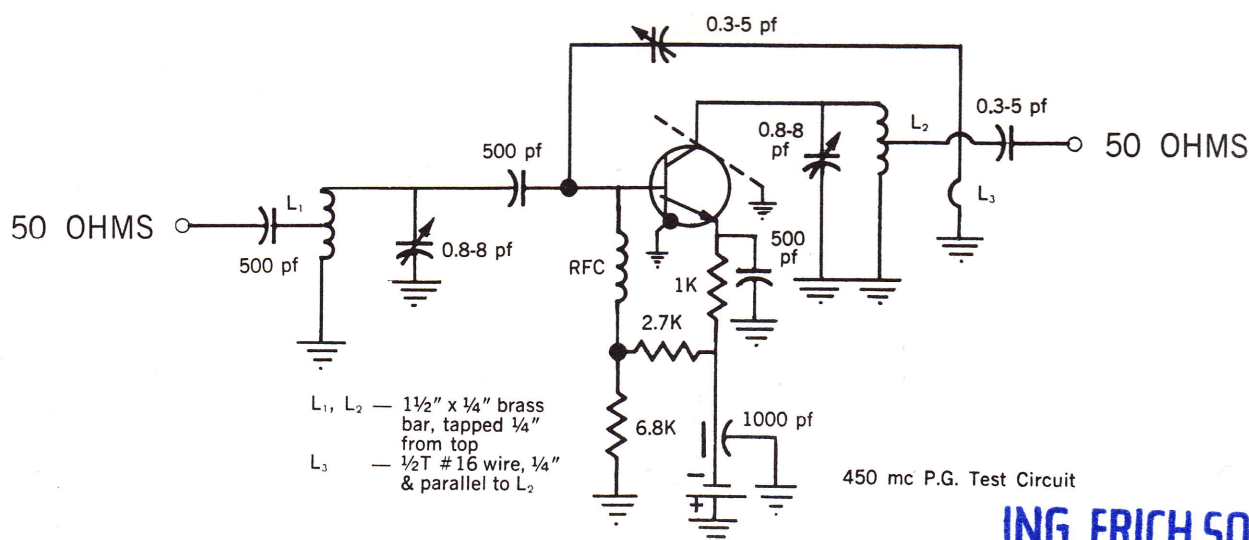


K5002

K5001

K5003

Test Circuit



ING ERICH SOMMER
ELEKTRONIK-GMBH
6 FRANKFURT/M. 1
Jahnstr. 43 - Tel. (0611) 550288



semiconductor
corporation

PARKER ROAD, RD. 2, LONG VALLEY, N. J. 07853

(201) 876-3811

Kmc K5001 K5002 K5003

ELECTRICAL PARAMETERS AT 25°C

		K5001			K5002			K5003			
SYMBOL	PARAMETER	TEST CONDITIONS			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	UNITS
BV _{CBO}	collector-base breakdown	I _C = 10 μ a			25	30	—	25	30	—	volts
BV _{EBO}	emitter-base breakdown	I _E = 10 μ a			2.5	5	—	2.5	5	—	volts
I _{CBO}	collector cutoff current	V _{CB} = 15v			—	.01	.05	—	.01	.05	μ a
h _{FE}	current transfer ratio	I _C = 3ma, V _{CE} = 1v,			20	100	300	20	100	300	—
C _{ob}	output capacitance NOTE 1	V _{CB} = 10v			—	.8	1.0	—	.8	1.0	pf
G _{pe}	small signal power gain	f = 450mc, V _{CE} = 6v I _C = .7 ma.			18	22	—	18	22	—	db
NF	noise figure (device)	f = 450 mc, V _{CE} = 6v I _C = .7 ma			—	1.4	1.5	—	1.7	2.0	db
NF	noise figure (device)	f = 200mc, V _{CE} = 6v I _C = 1 ma			—	1.0	1.25	—	1.25	1.5	db

Note 1: This is a floating measurement. These transistors have an intrinsic feedback capacitance (C_{bc}) of 0.35 pf.
The package capacitance is approximately 0.4 pf.