



2425-25

25 WATT, 24V, Class C

Microwave 2410-2470 MHz

GENERAL DESCRIPTION

The **2425-25** is a common base bipolar transistor capable of providing 25 Watts of Class C RF output power over the band of 2410-2470 MHz. This transistor is specifically designed for microwave broadband Class C amplifier applications. It includes input and output matching and uses gold metallization and diffused ballasting to provide high reliability and supreme ruggedness.

ABSOLUTE MAXIMUM RATINGS

Power Dissipation

Device Dissipation @25°C (P_d)	75 W
Thermal Resistance (θ_{JC})	2.5°C/W

Voltage and Current

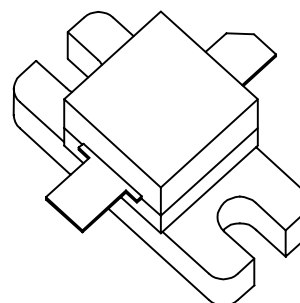
Collector-Emitter Voltage	48V
Emitter-Base Voltage	3.5V
Collector Current	3A

Temperatures

Storage Temperature	-65 to +200°C
Operating Junction Temperature	+200°C

CASE OUTLINE

55AP
Common Base
Narrow Lead



ELECTRICAL CHARACTERISTICS @ 25°C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
BVebo	Emitter-Base Breakdown(open)	I _e =25mA	3.5			V
BVces	Collector-Emitter Breakdown(shorted)	I _c =160mA	48			V
h _{FE}	DC Current Gain	I _c =160mA, V _{ce} =5V	10		100	β

FUNCTIONAL CHARACTERISTICS @ 25°C

G _{PB}	Common Base Power Gain	V _{cc} = 24V, F = 2410-2470 MHz, P _{out} =25W	7.5	8		dB
η _c	Collector Efficiency	V _{cc} = 24V, F = 2410-2470 MHz, P _{out} =25W	47	49		%
VSWR	Output Load Mismatch	V _{cc} = 24V, F = 2410-2470 MHz, P _{out} =25W			3:1	Ψ
Z _{in} (1)	Series Source Impedance	V _{cc} =24V,F=2410,2440,2470 MHz,P _{out} =25W	8.6-j19.7	8.4-j19.1	8.2-j18.5	Ω
Z _{out} (2)	Series Load Impedance	V _{cc} =24V,F=2410,2440,2470 MHz,P _{out} =25W	6.1-j5.7	6.1-j5.5	6.1-j5.2	Ω

(1) Circuit source impedance (@ the device input) at which the device operates.

(2) Optimum load impedance into which the device output operates.

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CH2 TECHNOLOGY

CAGE
0PJR2

DWG. NO.
2425-25 Test Fixture Schematic

SCALE
n/a

SHEET

REV
1

ZONE

REV

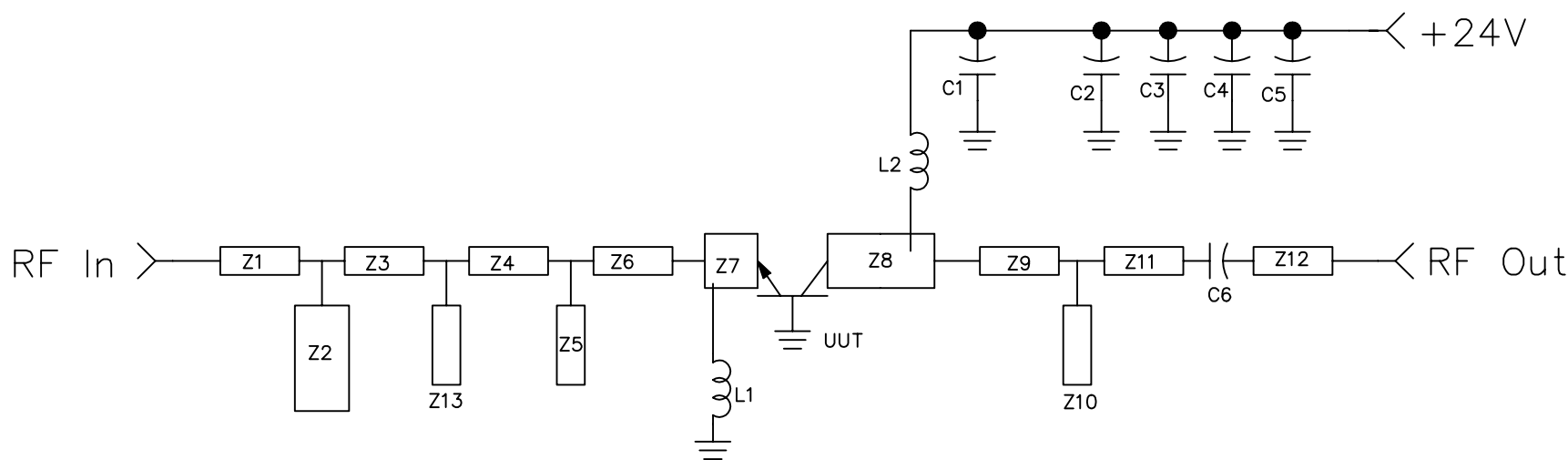
DESCRIPTION

REVISIONS

DATE

APPROVED

Test Fixture Schematic For The 2425-25



Z1- Z13 See PCB Autocad Drawing 2425-25pcbrev2.dwg

L1,L2 3 Turns 20 Awg, .150 ID

C1 62pF ATC 100B

C2 .001uF ATC1206

C3 .010uF ATC1206

C4 .1uF ATC1206

C5 47uF 50V Electrolytic

C6 62 pF ATC 100B

MECHANICAL DWG OF FIXTURE LAYOUT AVAILABLE UPON REQUEST