GHz TECHNOLOGY
RF·MICROWAVE SILICON POWER TRANSISTORS

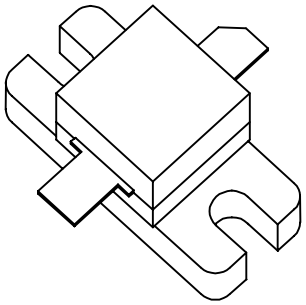
2425-25

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.

CASE OUTLINE
55AP
Common Base
Narrow Lead



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

ELECTRICAL CHARACTERISTICS @ 25°C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
BVebo	Emitter-Base Breakdown(open)	Ie=25mA	3.5			V
BVces	Collector-Emitter Breakdown(shorted)	Ic=160mA	48			V
h_{FE}	DC Current Gain	Ic=160mA, Vce=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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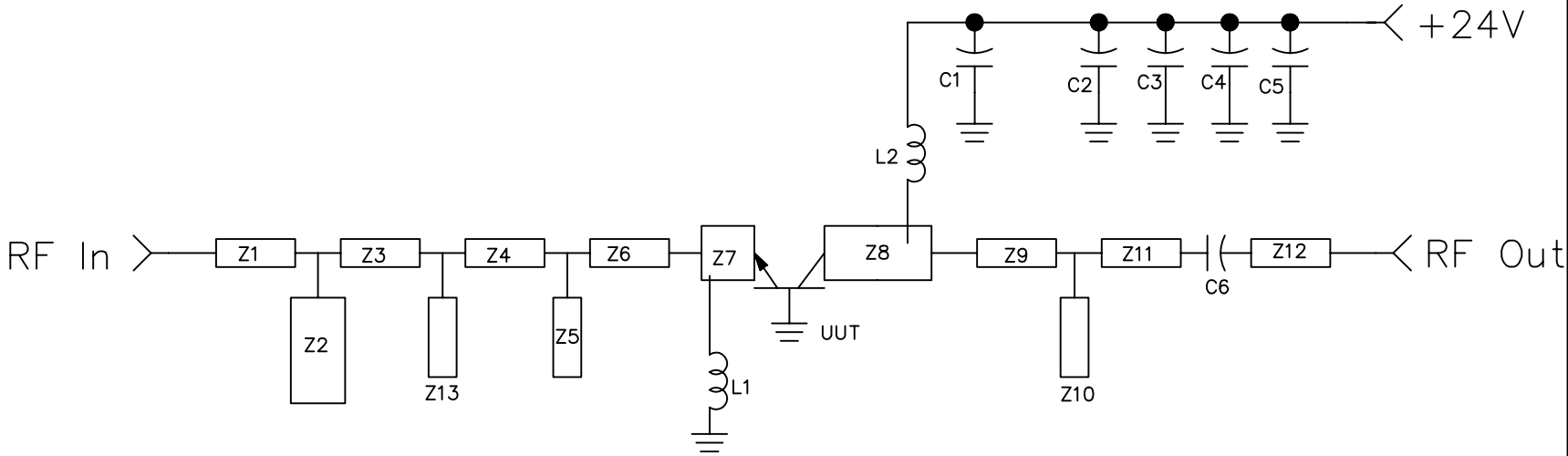
Test Fixture Schematic For The 2425-25



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

CHz TECHNOLOGY

CAGE 0PJR2

DWG NO. 2425-25 Test Fixture Schematic

SCALE n/a

SHEET

REV I

ZONE | REV | DESCRIPTION | DATE | APPROVED

REVISIONS