

CW Power Transistor, 3.5W

2.3 GHz

PH2323-3

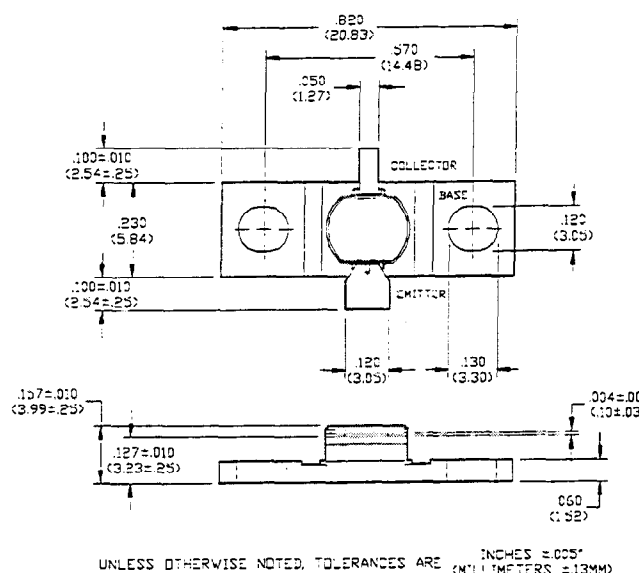
V2.00

Features

- NPN Silicon Microwave Power Transistor
- Common Base Configuration
- Class C Operation
- Interdigitated Geometry
- Diffused Emitter Ballasting Resistors
- Gold Metalization System
- Hermetic Metal/Ceramic Package

Absolute Maximum Ratings at 25°C

Parameter	Symbol	Rating	Units
Collector-Emitter Voltage	V_{CES}	60	V
Emitter-Base Voltage	V_{EB0}	3.0	V
Collector Current	I_C	0.4	A
Power Dissipation	P_D	11	W
Junction Temperature	T_J	200	°C
Storage Temperature	T_{STG}	-65 to +200	°C
Thermal Resistance	θ_{JC}	15	°C/W

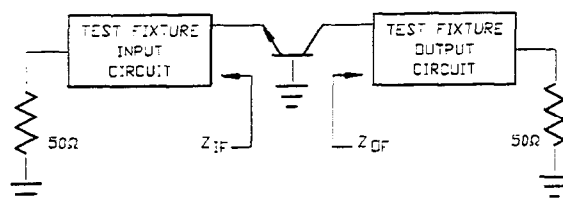


Electrical Characteristics at 25°C

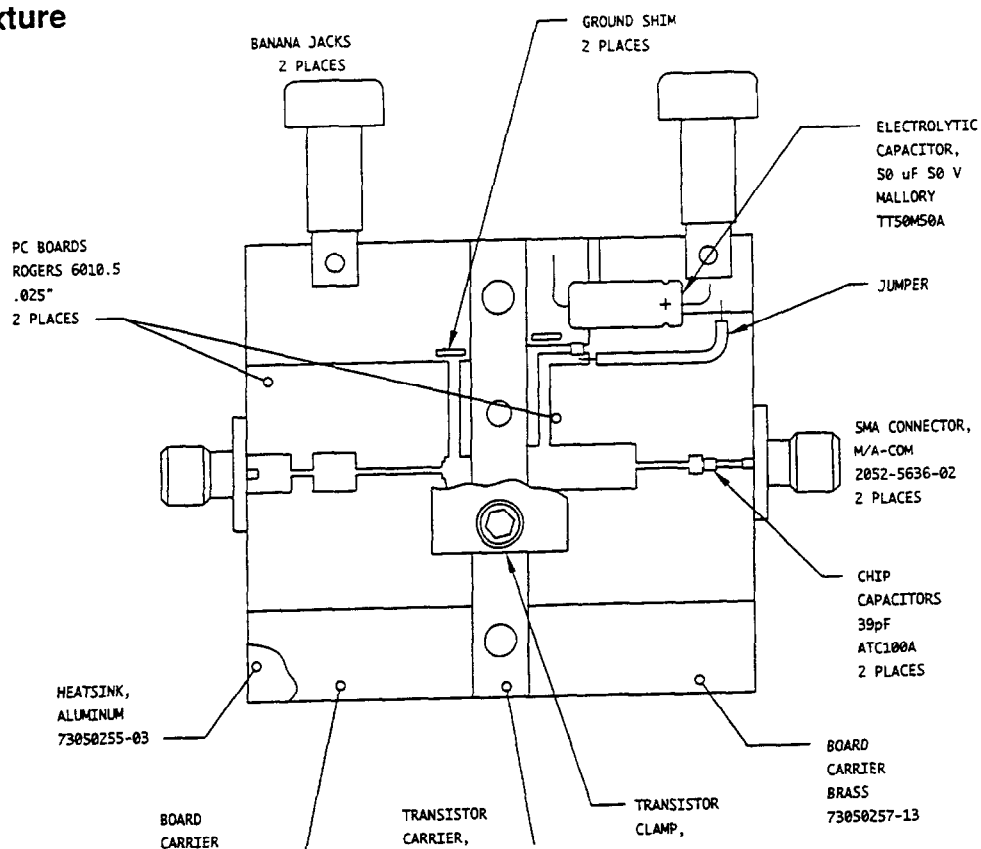
Parameter	Symbol	Min	Max	Units	Test Conditions
Collector-Emitter Breakdown Voltage	BV_{CES}	60	-	V	$I_C = 5 \text{ mA}$
Collector-Emitter Leakage Current	I_{CES}	-	1.0	mA	$V_{CE} = 28 \text{ V}$
Input Power	P_{IN}	-	0.48	W	$V_{CC} = 28 \text{ V}$, $P_{OUT} = 3.0 \text{ W}$, $F = 2.3 \text{ GHz}$
Power Gain	G_P	8	-	dB	$V_{CC} = 28 \text{ V}$, $P_{OUT} = 3.0 \text{ W}$, $F = 2.3 \text{ GHz}$
Collector Efficiency	η_C	30	-	%	$V_{CC} = 28 \text{ V}$, $P_{OUT} = 3.0 \text{ W}$, $F = 2.3 \text{ GHz}$
Input Return Loss	RL	6	-	dB	$V_{CC} = 28 \text{ V}$, $P_{OUT} = 3.0 \text{ W}$, $F = 2.3 \text{ GHz}$
Load Mismatch Tolerance	VSWR-T	-	3:1	-	$V_{CC} = 28 \text{ V}$, $P_{OUT} = 3.0 \text{ W}$, $F = 2.3 \text{ GHz}$

Test Fixture Impedances

F(GHz)	$Z_{IF}(\Omega)$	$Z_{OF}(\Omega)$
2.30	$6.5 - j23.0$	$6.3 + j5.4$



RF vTest Fixture



Test Fixture PC Board Dimensions

