

CW Power Transistor, 1W 2.3 GHz

PH2323-1

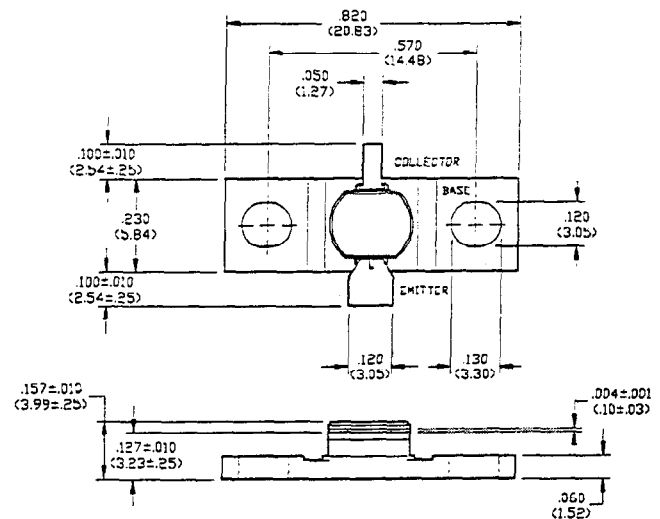
V2.00

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_{EBO}	3.0	V
Collector Current	I_C	0.2	A
Power Dissipation	P_D	7.0	W
Junction Temperature	T_J	200	°C
Storage Temperature	T_{STG}	-65 to +200	°C
Thermal Resistance	θ_{JC}	25	°C/W



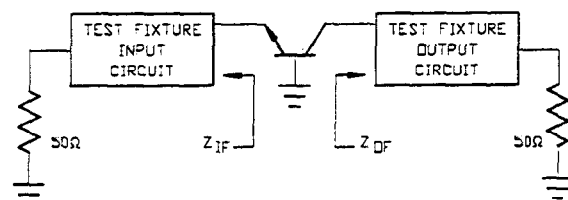
UNLESS OTHERWISE NOTED, TOLERANCES ARE INCHES ±.003
(MILLIMETERS ±.13MM)

Electrical Characteristics at 25°C

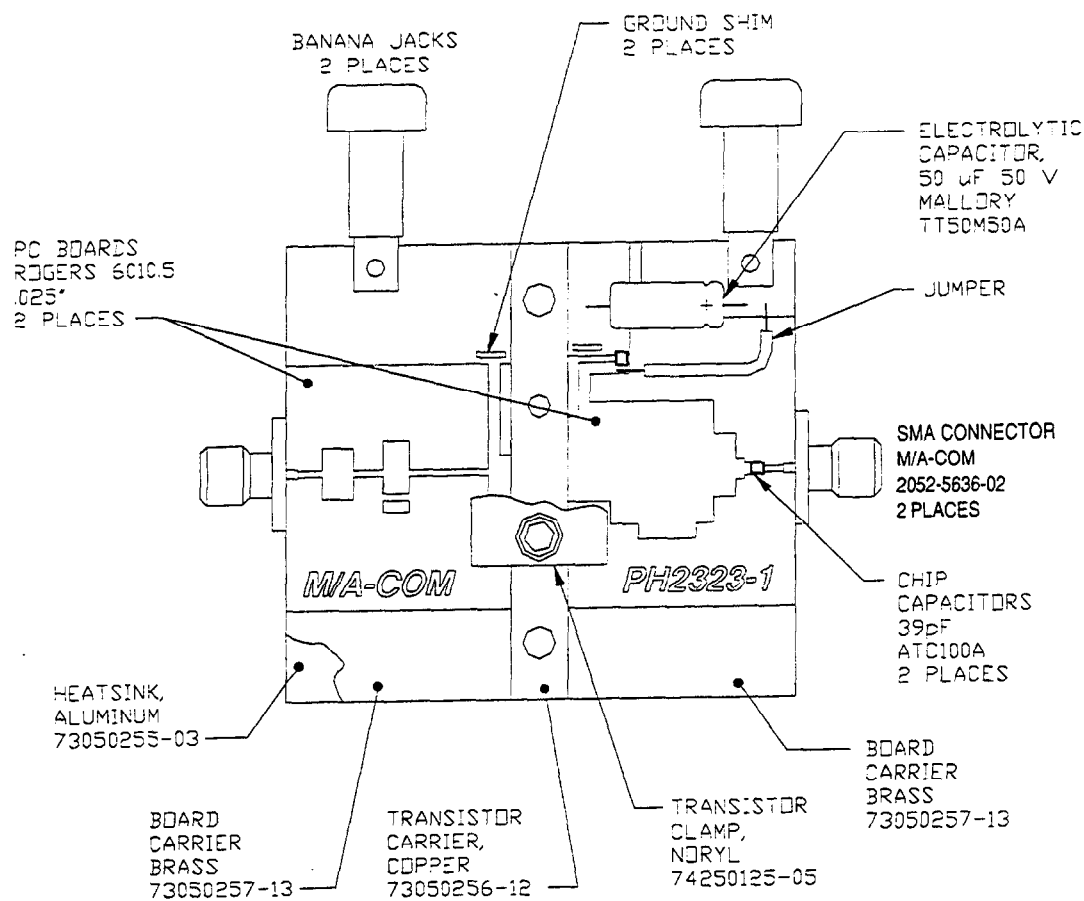
Parameter	Symbol	Min	Max	Units	Test Conditions
Collector-Emitter Breakdown Voltage	BV_{CES}	60	-	V	$I_C = 2.5 \text{ mA}$
Collector-Emitter Leakage Current	I_{CES}	-	0.5	mA	$V_{CE} = 28 \text{ V}$
Input Power	P_{IN}	-	0.158	W	$V_{CC} = 28 \text{ V}$, $P_{OUT} = 1.0 \text{ W}$, $F = 2.3 \text{ GHz}$
Power Gain	G_P	8	-	dB	$V_{CC} = 28 \text{ V}$, $P_{OUT} = 1.0 \text{ W}$, $F = 2.3 \text{ GHz}$
Collector Efficiency	η_C	30	-	%	$V_{CC} = 28 \text{ V}$, $P_{OUT} = 1.0 \text{ W}$, $F = 2.3 \text{ GHz}$
Input Return Loss	RL	6	-	dB	$V_{CC} = 28 \text{ V}$, $P_{OUT} = 1.0 \text{ W}$, $F = 2.3 \text{ GHz}$
Load Mismatch Tolerance	VSWR-T	-	3:1	-	$V_{CC} = 28 \text{ V}$, $P_{OUT} = 1.0 \text{ W}$, $F = 2.3 \text{ GHz}$

Test Fixture Impedances

F(GHz)	$Z_{IF}(\Omega)$	$Z_{OF}(\Omega)$
2.30	12.5 - j26.0	3.7 + j10.4



RF Test Fixture



Test Fixture PC Board Dimensions

