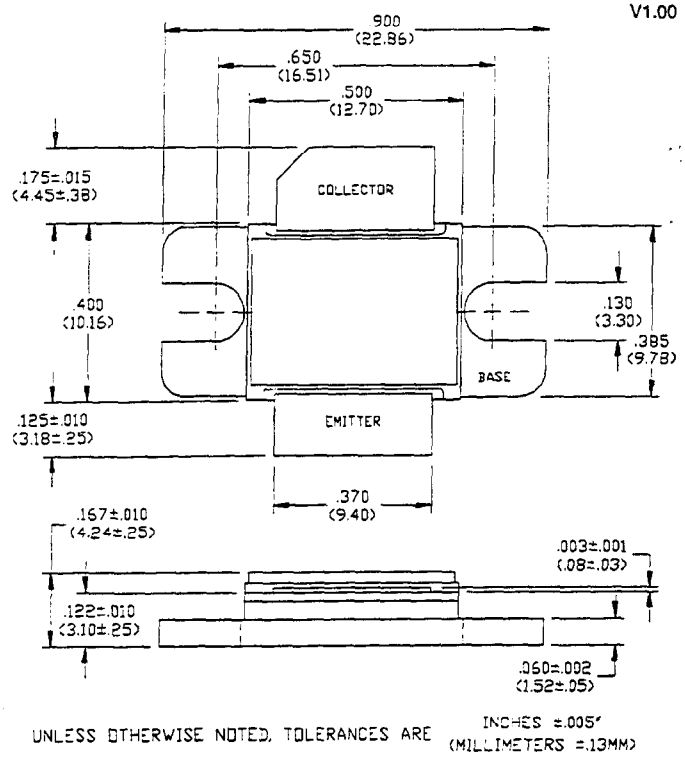
Wireless Bipolar Power Transistor, 45W 1805 - 1880 MHz

PH1819-45

V1.00

Features

- NPN Silicon Microwave Power Transistor
- Common Emitter Class AB Operation
- Internal Input and Output Impedance Matching
- Diffused Emitter Ballasting
- Gold Metalization System



Absolute Maximum Ratings at 25°C

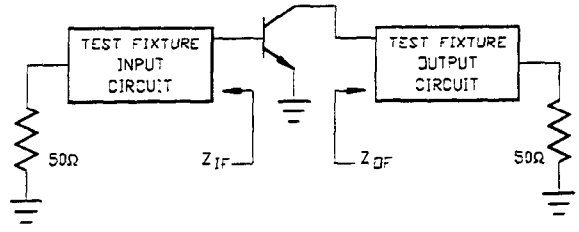
Parameter	Symbol	Rating	Units
Collector-Emitter Voltage	V_{CES}	25	V
Collector-Emitter Voltage	V_{CES}	65	V
Emitter-Base Voltage	V_{EBO}	3.0	V
Collector Current	I_C	5.5	A
Power Dissipation	P_D	100	W
Junction Temperature	T_J	200	°C
Storage Temperature	T_{STG}	-65 to +200	°C
Thermal Resistance	θ_{JC}	1.3	°C/W

Electrical Characteristics at 25°C

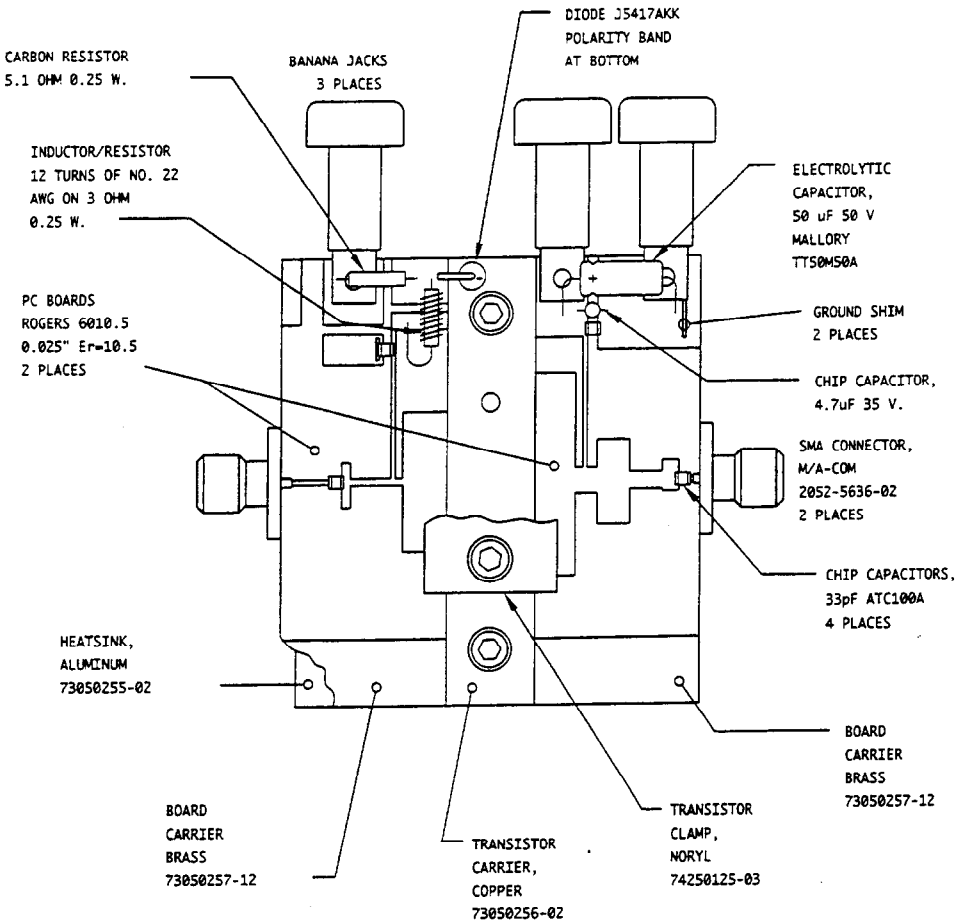
Parameter	Symbol	Min	Max	Units	Test Conditions
Power Gain	G_P	8	-	dB	V_{CC}=25 V, I_{CQ}=200 mA, P_{OUT}=45 W, F=1805, 1880 MHz
Collector Efficiency	η_C	40	-	%	V_{CC}=25 V, I_{CQ}=200 mA, P_{OUT}=45 W, F=1805, 1880 MHz
Input Return Loss	RL	10	-	dB	V_{CC}=25 V, I_{CQ}=200 mA, P_{OUT}=45 W, F=1805, 1880 MHz
Load Mismatch Tolerance	VSWR-T	-	3:1	-	V_{CC}=25 V, I_{CQ}=200 mA, P_{OUT}=45 W, F=1805, 1880 MHz

Broadband Test Fixture Impedances

F(MHz)	$Z_{IF}(\Omega)$	$Z_{OF}(\Omega)$
1805	2.0 - j3.8	3.7 - j1.4
1850	2.0 - j3.8	3.9 - j1.8
1880	2.0 - j3.7	3.9 - j2.1



RF Test Fixture



Test Fixture PC Board Dimensions