

# Wireless Bipolar Power Transistor, 45W

## 1805 - 1880 MHz

## PH1819-45

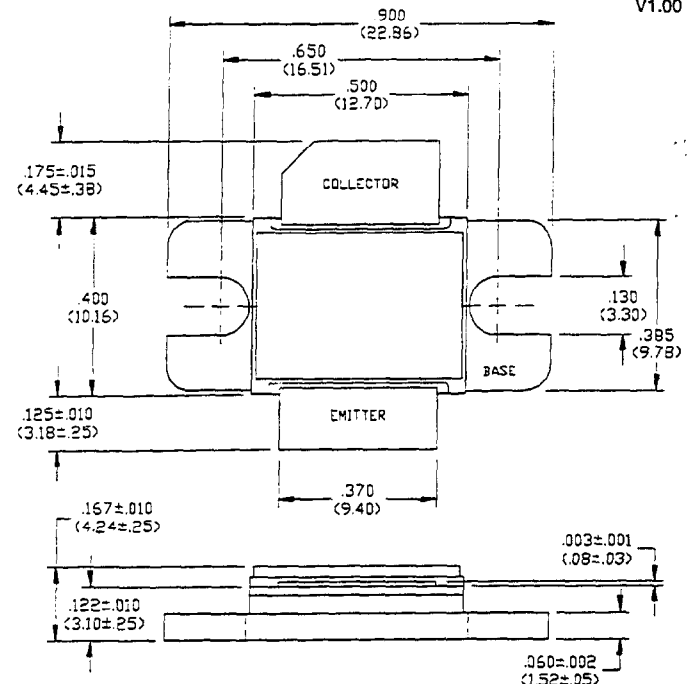
V1.00

### 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	$\theta_{JC}$	1.3	°C/W



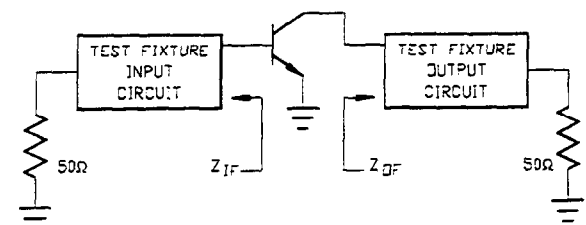
UNLESS OTHERWISE NOTED, TOLERANCES ARE INCHES = .005" (MILLIMETERS = .13MM)

### Electrical Characteristics at 25°C

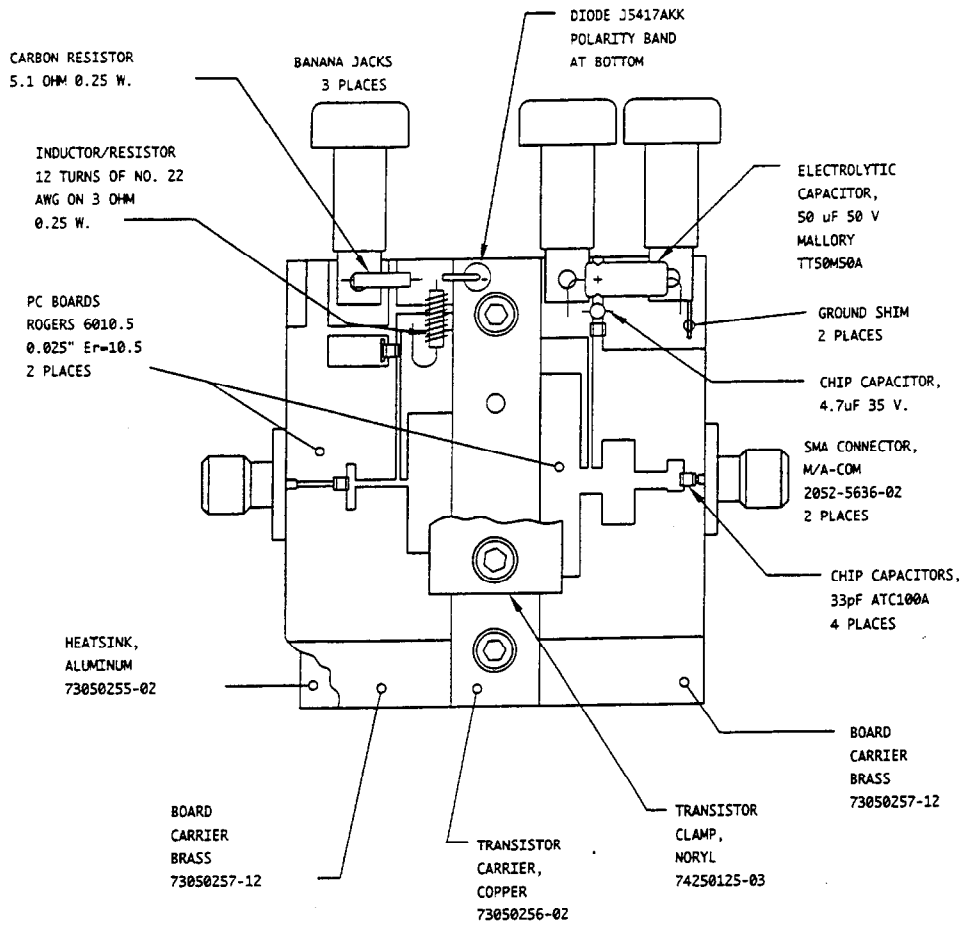
Parameter	Symbol	Min	Max	Units	Test Conditions
Power Gain	$G_p$	8	-	dB	$V_{CC}=25\text{ V}$ , $I_{CO}=200\text{ mA}$ , $P_{OUT}=45\text{ W}$ , $F=1805, 1880\text{ MHz}$
Collector Efficiency	$\eta_c$	40	-	%	$V_{CC}=25\text{ V}$ , $I_{CO}=200\text{ mA}$ , $P_{OUT}=45\text{ W}$ , $F=1805, 1880\text{ MHz}$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

### 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

