

# Radar Pulsed Power Transistor, 50W, 100 $\mu$ s Pulse, 10% Duty 2.2 - 2.6 GHz

## PH2226-50M

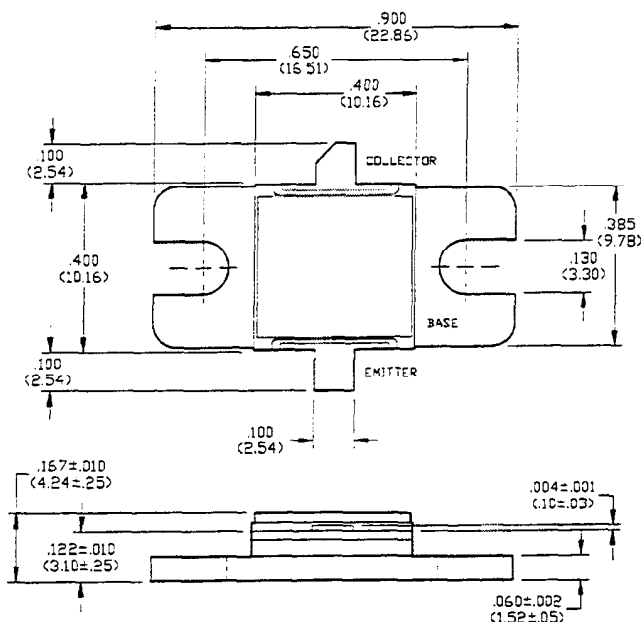
V2.00

### Features

- NPN Silicon Power Transistor
- Common Base Configuration
- Broadband Class C Operation
- Diffused Emitter Ballasting Resistors
- Gold Metalization System
- Internal Input Impedance Matching
- Hermetic Metal/Ceramic Package

### Absolute Maximum Ratings at 25°C

Parameter	Symbol	Rating	Units
Collector-Emitter Voltage	$V_{CES}$	63	V
Emitter-Base Voltage	$V_{EBO}$	3.0	V
Collector Current (Peak)	$I_C$	6	A
Total Power Dissipation	$P_{TOT}$	159	W
Junction Temperature	$T_J$	200	°C
Storage Temperature	$T_{STG}$	-65 to +200	°C



UNLESS OTHERWISE NOTED, TOLERANCES ARE INCHES  $\pm 0.005$   
(MILLIMETERS  $\pm 0.13$ MM)

### Electrical Characteristics at 25°C

Parameter	Symbol	Min	Max	Units	Test Conditions
Collector-Emitter Breakdown Voltage	$BV_{CES}$	63	-	V	$I_C=15$ mA
Collector-Emitter Leakage Current	$I_{CES}$	-	3.0	mA	$V_{CE}=36$ V
Thermal Resistance	$R_{TH(JC)}$	-	1.1	°C/W	$V_{CC}=36$ V, $P_{IN}=8$ W, $F=2.2, 2.4, 2.6$ GHz
Output Power	$P_{OUT}$	50	-	W	$V_{CC}=36$ V, $P_{IN}=8$ W, $F=2.2, 2.4, 2.6$ GHz
Power Gain	$G_P$	8	-	dB	$V_{CC}=36$ V, $P_{IN}=8$ W, $F=2.2, 2.4, 2.6$ GHz
Collector Efficiency	$\eta_C$	45	-	%	$V_{CC}=36$ V, $P_{IN}=8$ W, $F=2.2, 2.4, 2.6$ GHz
Input Return Loss	RL	9	-	dB	$V_{CC}=36$ V, $P_{IN}=8$ W, $F=2.2, 2.4, 2.6$ GHz
Load Mismatch Tolerance	VSWR-T	-	3:1	-	$V_{CC}=36$ V, $P_{IN}=8$ W, $F=2.2, 2.4, 2.6$ GHz
Load Mismatch Stability	VSWR-S	-	1.5:1	-	$V_{CC}=36$ V, $P_{IN}=8$ W, $F=2.2, 2.4, 2.6$ GHz

### Broadband Test Fixture Impedances

F(GHz)	$Z_{IF}(\Omega)$	$Z_{OF}(\Omega)$
2.25	15.0 - j7.0	12.8 - j3.0
2.40	14.0 - j5.5	12.0 - j1.6
2.55	13.7 - j4.0	11.8 - j0.4

