

Radar Pulsed Power Transistor, 110W, 100μs Pulse, 10% Duty

2.25 - 2.55 GHz

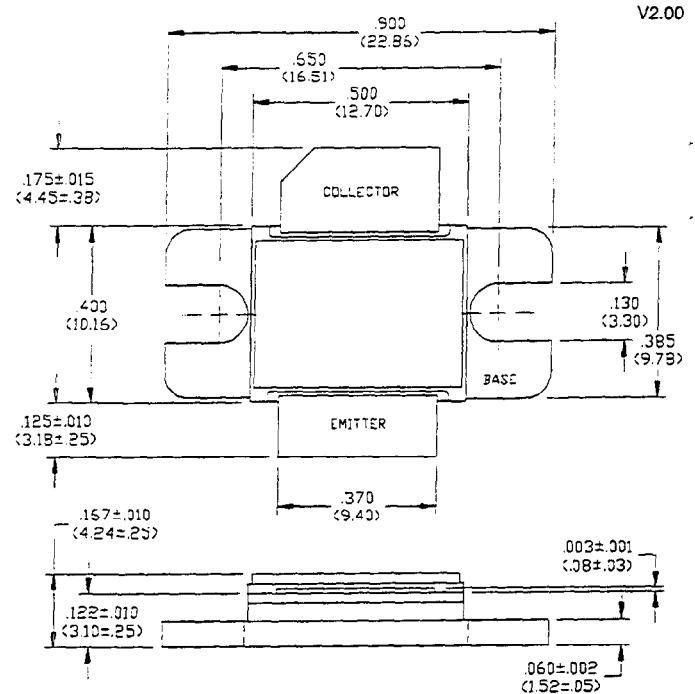
PH2226-110M

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	15	A
Total Power Dissipation	P_{TOT}	583	W
Junction Temperature	T_J	200	°C
Storage Temperature	T_{STG}	-65 to +200	°C



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

Electrical Characteristics at 25°C

Parameter	Symbol	Min	Max	Units	Test Conditions
Collector-Emitter Breakdown Voltage	BV_{CES}	63	-	V	$I_C = 40$ mA
Collector-Emitter Leakage Current	I_{CES}	-	7.5	mA	$V_{CE} = 36$ V
Thermal Resistance	$R_{TH(JC)}$	-	0.3	°C/W	$V_{CC} = 36$ V, $P_{IN} = 18$ W, $F = 2.2, 2.4, 2.6$ GHz
Output Power	P_{OUT}	110	-	W	$V_{CC} = 36$ V, $P_{IN} = 18$ W, $F = 2.2, 2.4, 2.6$ GHz
Power Gain	G_p	8	-	dB	$V_{CC} = 36$ V, $P_{IN} = 18$ W, $F = 2.2, 2.4, 2.6$ GHz
Collector Efficiency	η_c	45	-	%	$V_{CC} = 36$ V, $P_{IN} = 18$ W, $F = 2.2, 2.4, 2.6$ GHz
Input Return Loss	RL	9	-	dB	$V_{CC} = 36$ V, $P_{IN} = 18$ W, $F = 2.2, 2.4, 2.6$ GHz
Load Mismatch Tolerance	VSWR-T	-	3:1	-	$V_{CC} = 36$ V, $P_{IN} = 18$ W, $F = 2.2, 2.4, 2.6$ GHz
Load Mismatch Stability	VSWR-S	-	1.5:1	-	$V_{CC} = 36$ V, $P_{IN} = 18$ W, $F = 2.2, 2.4, 2.6$ GHz

Broadband Test Fixture Impedances

F(GHz)	$Z_{IF}(\Omega)$	$Z_{OF}(\Omega)$
2.25	$2.8 - j3.4$	$4.1 - j2.9$
2.40	$2.9 - j3.0$	$3.8 - j2.9$
2.55	$3.1 - j2.6$	$3.3 - j2.7$

