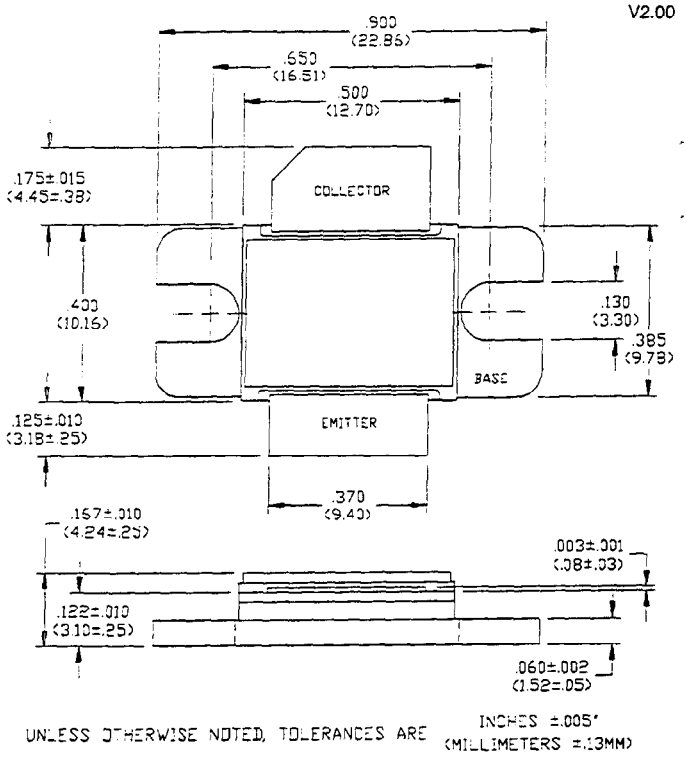
Radar Pulsed Power Transistor, 110W, 100µs Pulse, 10% Duty
2.25 - 2.55 GHz PH2226-110M

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

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