

Avionics Pulsed Power Transistor, 70W, TACAN Format 1025-1150 MHz

PH1012-70

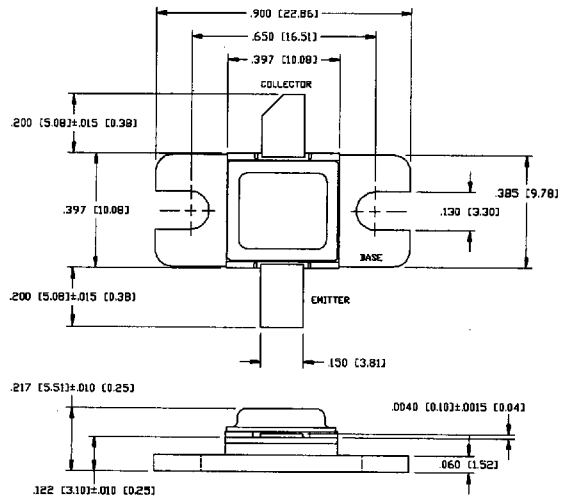
V1.00

Features

- NPN Silicon Microwave Power Transistor
- Common Base Configuration
- Broadband Class C Operation
- High Efficiency Interdigitated Geometry
- 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}	65	V
Emitter-Base Voltage	V_{EBO}	3.0	V
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}	65	-	V	$I_C = 100$ mA
Collector-Emitter Leakage Current	I_{CES}	-	30	mA	$V_{CE} = 65$ V
Input Power	P_{IN}	4.4	14	W	$V_{CC} = 48.6$ V, $P_{OUT} = 70$ W, $F = 1025, 1090, 1150$ MHz, N1
Power Gain	G_P	7.0	12	dB	$V_{CC} = 48.6$ V, $P_{OUT} = 70$ W, $F = 1025, 1090, 1150$ MHz, N1
Collector Efficiency	η_C	35	-	%	$V_{CC} = 48.6$ V, $P_{OUT} = 70$ W, $F = 1025, 1090, 1150$ MHz, N1
Input Return Loss	RL	8	-	dB	$V_{CC} = 48.6$ V, $P_{OUT} = 70$ W, $F = 1025, 1090, 1150$ MHz, N1
Load Mismatch Tolerance	VSWR-T	-	1.5:1	-	$V_{CC} = 48.6$ V, $P_{OUT} = 70$ W, $F = 1025, 1090, 1150$ MHz, N1
Load Mismatch Stability	VSWR-S	-	5:1	-	$V_{CC} = 48.6$ V, $P_{OUT} = 70$ W, $F = 1090$ MHz, N1

N1: TACAN pulse format consists of two, 4.0 usec pulses separated by 11.5 usec for 150 pairs per second. Duty Factor=0.12%

This Data Sheet Contains Typical Electrical Specifications Which May Change Prior to Final Introduction.

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