

# Radar Pulsed Power Transistor, 5W, 2 $\mu$ s Pulse, 10% Duty 3.1 - 3.5 GHz PH3135-5S

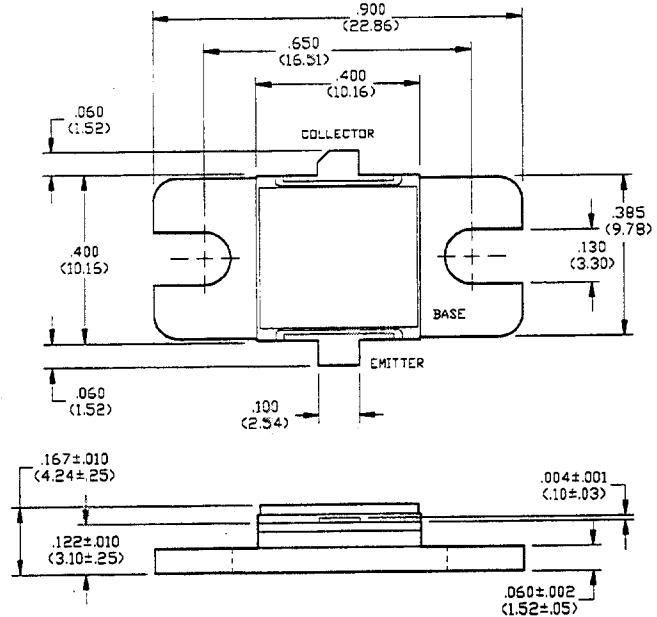
V2.00

## 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 and Output Impedance Matching
- Hermetic Metal/Ceramic Package

## Absolute Maximum Ratings at 25°C

Parameter	Symbol	Rating	Units
Collector-Emitter Voltage	$V_{CES}$	60	V
Emitter-Base Voltage	$V_{EBO}$	3.0	V
Collector Current (Peak)	$I_C$	0.75	A
Total Power Dissipation	$P_{TOT}$	60	W
Junction Temperature	$T_J$	200	°C
Storage Temperature	$T_{STG}$	-65 to +200	°C



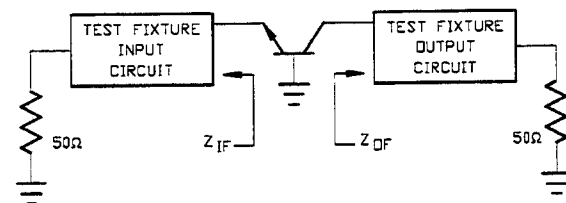
UNLESS OTHERWISE NOTED, TOLERANCES ARE INCHES  $\pm 0.005$   
(MILLIMETERS  $\pm 0.13$ MM)

## Electrical Characteristics at 25°C

Parameter	Symbol	Min	Max	Units	Test Conditions
Collector-Emitter Breakdown Voltage	$BV_{CES}$	60	-	V	$I_C=10$ mA
Collector-Emitter Leakage Current	$I_{CES}$	-	1.0	mA	$V_{CE}=40$ V
Thermal Resistance	$R_{TH(JC)}$	-	3.5	°C/W	$V_{CC}=33$ V, $P_{IN}=0.7$ W, $F=3.1, 3.3, 3.5$ GHz
Output Power	$P_{OUT}$	5.0	-	W	$V_{CC}=33$ V, $P_{IN}=0.7$ W, $F=3.1, 3.3, 3.5$ GHz
Power Gain	$G_P$	8.5	-	dB	$V_{CC}=33$ V, $P_{IN}=0.7$ W, $F=3.1, 3.3, 3.5$ GHz
Collector Efficiency	$\eta_C$	30	-	%	$V_{CC}=33$ V, $P_{IN}=0.7$ W, $F=3.1, 3.3, 3.5$ GHz
Input Return Loss	RL	6	-	dB	$V_{CC}=33$ V, $P_{IN}=0.7$ W, $F=3.1, 3.3, 3.5$ GHz
Load Mismatch Tolerance	VSWR-T	-	2:1	-	$V_{CC}=33$ V, $P_{IN}=0.7$ W, $F=3.1, 3.3, 3.5$ GHz

## Broadband Test Fixture Impedances

F(GHz)	$Z_{IF}(\Omega)$	$Z_{OF}(\Omega)$
3.10	24 - j4.4	24 - j20
3.30	20 - j0.7	18 - j11
3.50	17 + j3.9	15 - j3.0



Specifications Subject to Change Without Notice.

9-250

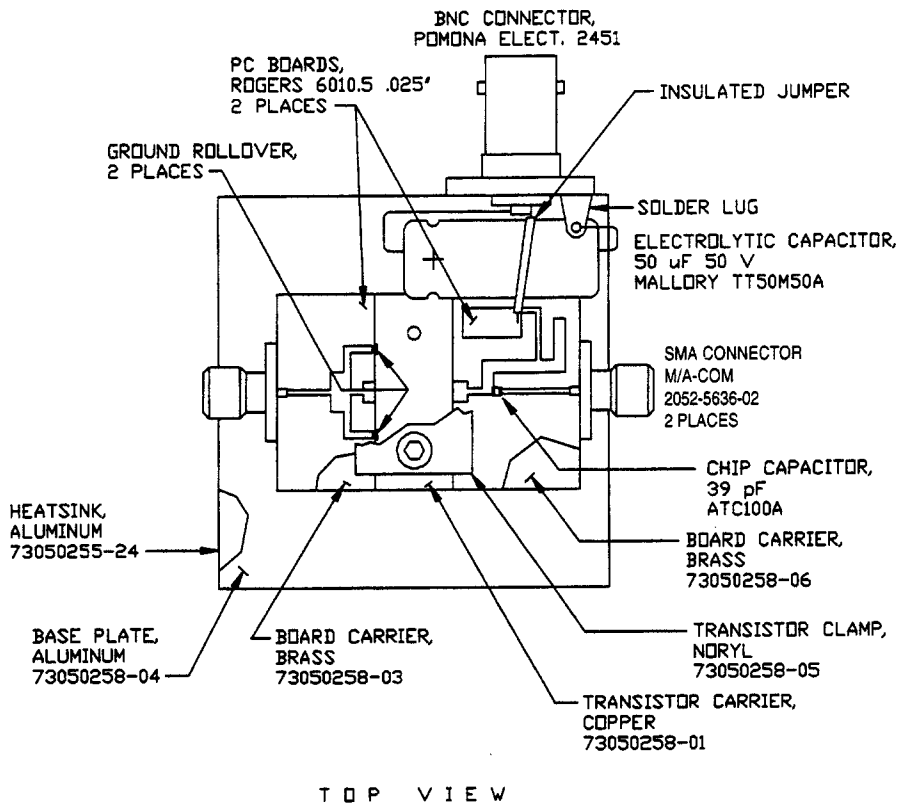
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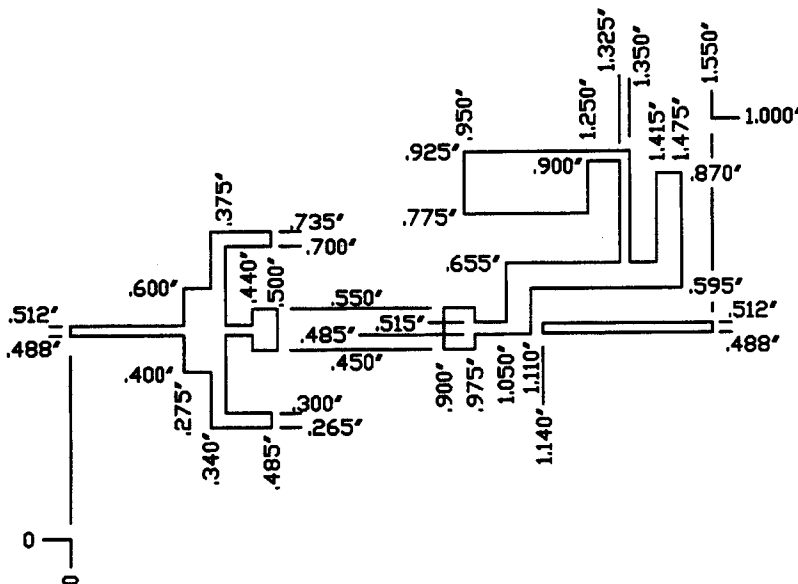
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RF Test Fixture



Test Fixture PC Board Dimensions



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