

# Radar Pulsed Power Transistor, 20W, 300µs Pulse, 10% Duty 3.1 - 3.4 GHz

## PH3134-20L

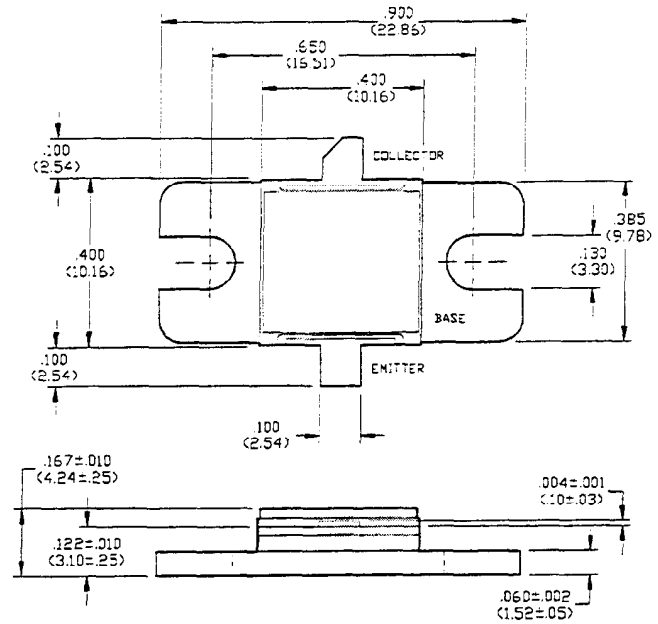
V2.00

### 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	$V_{CES}$	65	V
Emitter-Base Voltage	$V_{EB0}$	3.0	V
Collector Current (Peak)	$I_C$	2.4	A
Total Power Dissipation	$P_{TOT}$	146	W
Junction Temperature	$T_J$	200	°C
Storage Temperature	$T_{STG}$	-65 to +200	°C



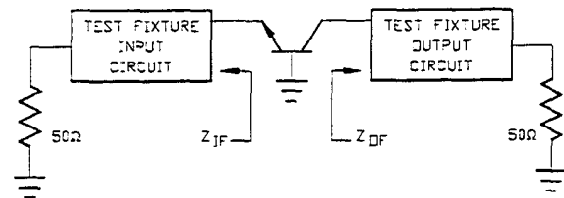
UNLESS OTHERWISE NOTED, TOLERANCES ARE INCHES ±.005" (MILLIMETERS ±.13MM)

### Electrical Characteristics at 25°C

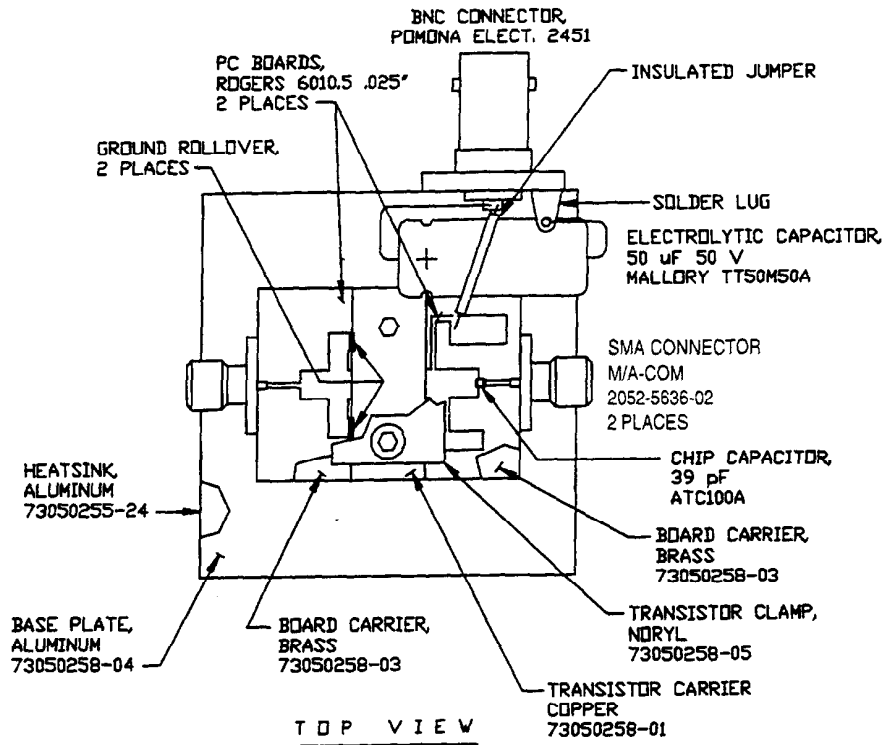
Parameter	Symbol	Min	Max	Units	Test Conditions
Collector-Emitter Breakdown Voltage	$BV_{CES}$	65	-	V	$I_C = 10$ mA
Collector-Emitter Leakage Current	$I_{CES}$	-	1.5	mA	$V_{CE} = 40$ V
Thermal Resistance	$R_{TH(JC)}$	-	1.2	°C/W	$V_{CC} = 36$ V, $P_{OUT} = 20$ W, $F = 3.1, 3.25, 3.4$ GHz
Input Power	$P_{IN}$	-	3.56	W	$V_{CC} = 36$ V, $P_{OUT} = 20$ W, $F = 3.1, 3.25, 3.4$ GHz
Power Gain	$G_P$	7.5	-	dB	$V_{CC} = 36$ V, $P_{OUT} = 20$ W, $F = 3.1, 3.25, 3.4$ GHz
Collector Efficiency	$\eta_C$	35	-	%	$V_{CC} = 36$ V, $P_{OUT} = 20$ W, $F = 3.1, 3.25, 3.4$ GHz
Input Return Loss	RL	6	-	dB	$V_{CC} = 36$ V, $P_{OUT} = 20$ W, $F = 3.1, 3.25, 3.4$ GHz
Load Mismatch Tolerance	VSWR-T	-	2:1	-	$V_{CC} = 36$ V, $P_{OUT} = 20$ W, $F = 3.25$ GHz

### Broadband Test Fixture Impedances

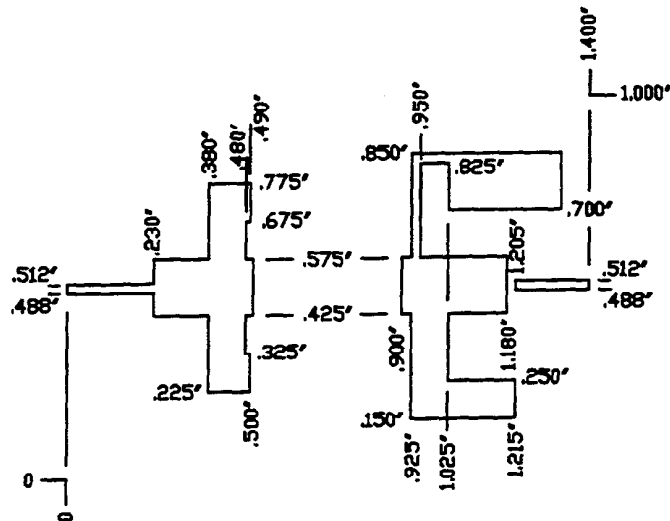
F (GHz)	$Z_{IF} (\Omega)$	$Z_{OF} (\Omega)$
3.10	16.0 + j5.0	19.0 + j3.0
3.25	14.5 + j2.0	15.5 - j2.0
3.40	11.5 + j0.0	10.0 - j3.5



RF Test Fixture



Test Fixture PC Board Dimensions



Specifications Subject to Change Without Notice.

M/A-COM, Inc.

9-237

North America: Tel. (800) 366-2266

Asia/Pacific: Tel. +81 (03) 3226-1671

Europe: Tel. +44 (1344) 869 595

Downloaded from Elcodis.com electronic Fax (800) 618-8883

Fax +81 (03) 3226-1451

Fax +44 (1344) 300 020