

Radar Pulsed Power Transistor, 55W, 300 μ s Pulse, 10% Duty 3.1 - 3.4 GHz

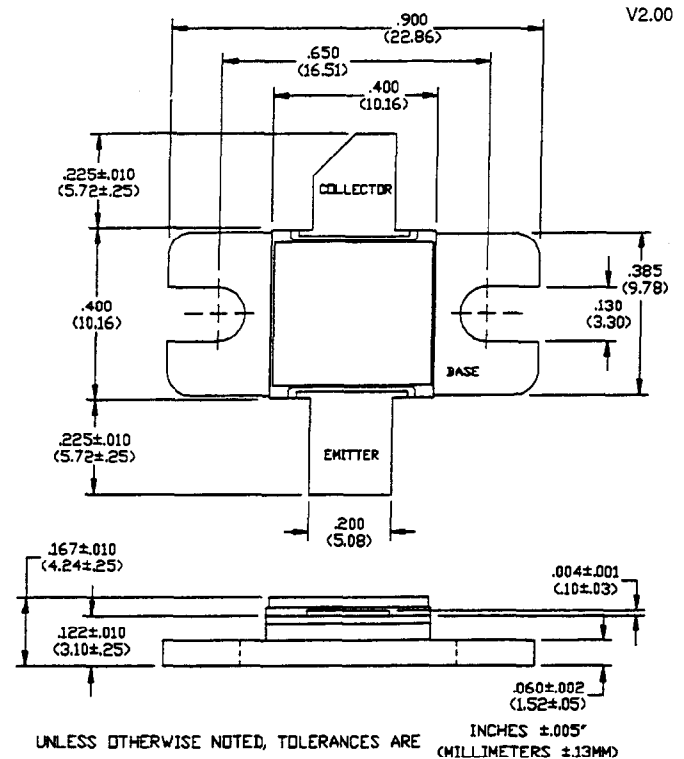
PH3134-55L

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_{EBO}	3.0	V
Collector Current (Peak)	I_C	6.5	A
Total Power Dissipation	P_{TOT}	350	W
Junction Temperature	T_J	200	°C
Storage Temperature	T_{STG}	-65 to +200	°C

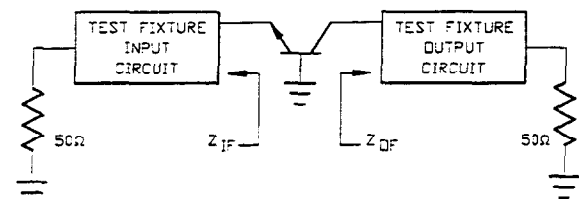


Electrical Characteristics at 25°C

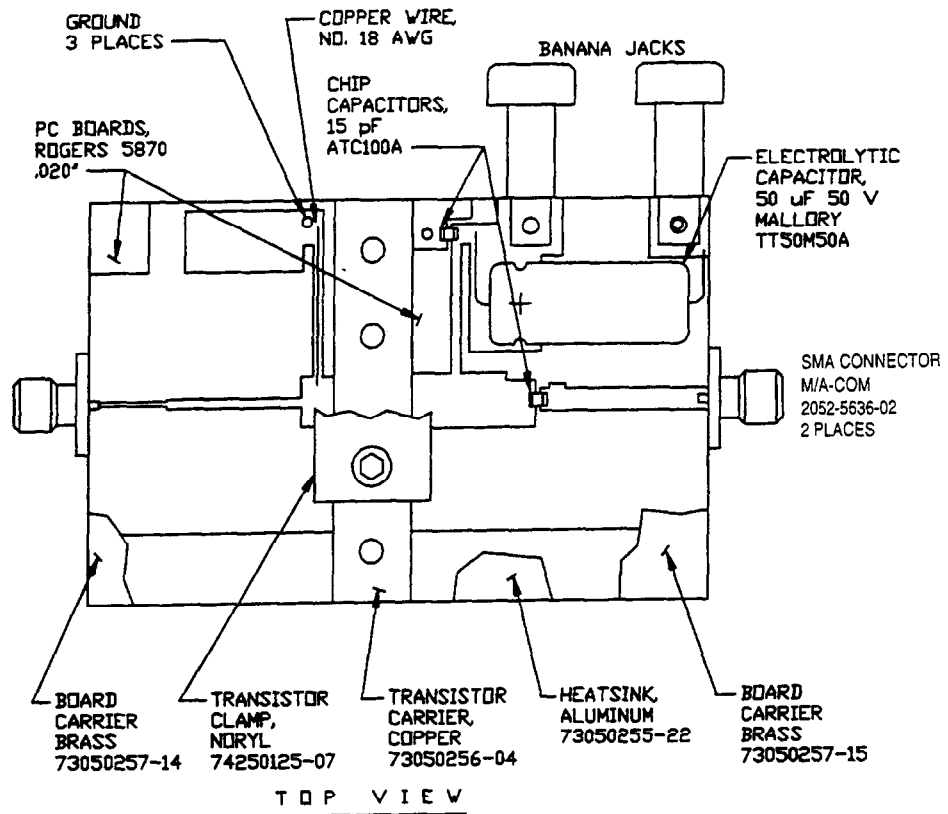
Parameter	Symbol	Min	Max	Units	Test Conditions
Collector-Emitter Breakdown Voltage	BV_{CES}	65	-	V	$I_C = 25$ mA
Collector-Emitter Leakage Current	I_{CES}	-	5.0	mA	$V_{CE} = 36$ V
Thermal Resistance	$R_{TH(JC)}$	-	0.5	°C/W	$V_{CC} = 36$ V, $P_{OUT} = 55$ W, $F = 3.10, 3.25, 3.40$ GHz
Input Power	P_{IN}	-	9.8	W	$V_{CC} = 36$ V, $P_{OUT} = 55$ W, $F = 3.10, 3.25, 3.40$ GHz
Power Gain	G_P	7.5	-	dB	$V_{CC} = 36$ V, $P_{OUT} = 55$ W, $F = 3.10, 3.25, 3.40$ GHz
Collector Efficiency	η_C	35	-	%	$V_{CC} = 36$ V, $P_{OUT} = 55$ W, $F = 3.10, 3.25, 3.40$ GHz
Input Return Loss	RL	6	-	dB	$V_{CC} = 36$ V, $P_{OUT} = 55$ W, $F = 3.10, 3.25, 3.40$ GHz
Load Mismatch Tolerance	VSWR-T	-	2:1	-	$V_{CC} = 36$ V, $P_{OUT} = 55$ W, $F = 3.25$ GHz

Broadband Test Fixture Impedances

F(GHz)	$Z_{IF}(\Omega)$	$Z_{OF}(\Omega)$
3.10	$11.2 - j11.7$	$8.1 - j5.3$
3.25	$11.5 - j9.5$	$7.1 - j4.3$
3.40	$12.7 - j7.6$	$6.4 - j3.3$



RF Test Fixture



Test Fixture PC Board Dimensions

