

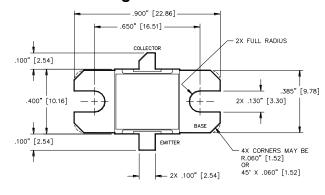
# Radar Pulsed Power Transistor 25W, 3.1-3.5 GHz, 2µs Pulse, 10% Duty

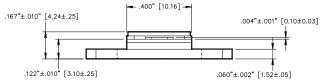
Rev. V1

#### **Features**

- NPN silicon microwave power transistors
- Common base configuration
- Broadband Class C operation
- High efficiency inter-digitized geometry
- Diffused emitter ballasting resistors
- Gold metallization system
- · Internal input and output impedance matching
- Hermetic metal/ceramic package
- RoHS compliant

#### **Outline Drawing**





UNLESS OTHERWISE NOTED, TOLERANCES ARE INCHES ±.005" [MILLIMETERS ±0.13MM]

### Absolute Maximum Ratings at 25°C

Parameter	Symbol	Rating	Units
Collector-Emitter Voltage	V <sub>CES</sub>	65	V
Emitter-Base Voltage	$V_{EBO}$	3.0	V
Collector Current (Peak)	Ic	3.0	Α
Power Dissipation @ +25°C	P <sub>TOT</sub>	195	W
Storage Temperature	T <sub>STG</sub>	-65 to +200	°C
Junction Temperature	TJ	200	°C

## Electrical Specifications: $T_c = 25 \pm 5^{\circ}C$ (Room Ambient)

Parameter	Test Conditions	Frequency	Symbol	Min	Max	Units
Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 10mA		BV <sub>CES</sub>	65	-	V
Collector-Emitter Leakage Current	V <sub>CE</sub> = 40V		I <sub>CES</sub>	-	1.5	mA
Thermal Resistance	Vcc = 36V, Pout = 25W	F = 3.1, 3.3, 3.5 GHz	R <sub>TH(JC)</sub>	-	0.9	°C/W
Output Power	Vcc = 36V, Pout = 25W	F = 3.1, 3.3, 3.5 GHz	P <sub>IN</sub>	-	4.5	W
Power Gain	Vcc = 36V, Pout = 25W	F = 3.1, 3.3, 3.5 GHz	G <sub>P</sub>	7.5	-	dB
Collector Efficiency	Vcc = 36V, Pout = 25W	F = 3.1, 3.3, 3.5 GHz	ης	35	-	%
Input Return Loss	Vcc = 36V, Pout = 25W	F = 3.1, 3.3, 3.5 GHz	RL	-	-6	dB
Load Mismatch Tolerance	Vcc = 36V, Pout = 25W	F = 3.1, 3.3, 3.5 GHz	VSWR-T	-	2:1	-

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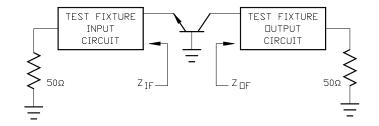


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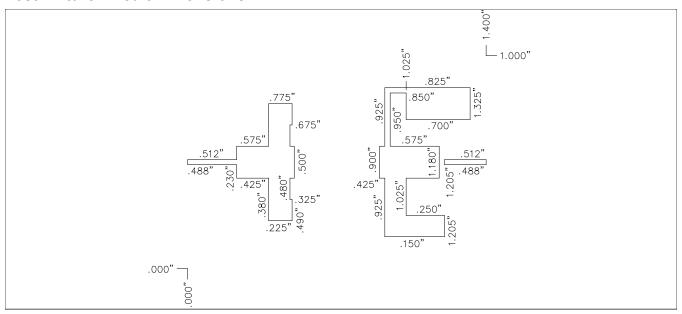
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#### **RF Test Fixture Impedance**

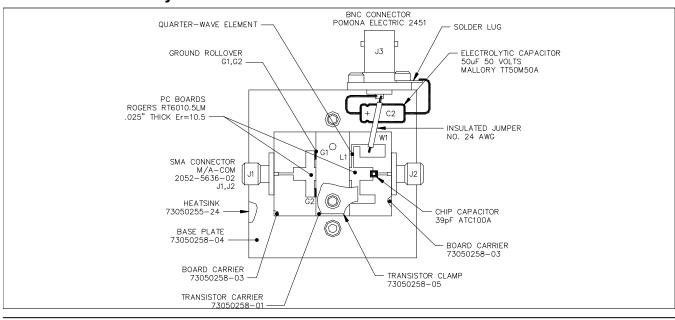
F (GHz)	Z <sub>IF</sub> (Ω)	Z <sub>OF</sub> (Ω)
3.1	16.0 + j5.5	19.0 + j3.4
3.3	14.5 + j1.6	14.2 - j2.8
3.5	11.3 + j0.0	10.7 - j3.3



#### **Test Fixture Circuit Dimensions**



#### **Test Fixture Assembly**



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# PH3135-25S



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