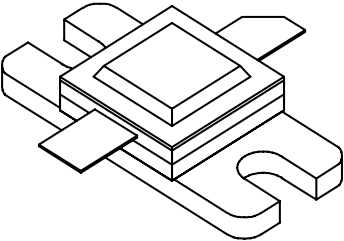




0910 – 60M

60 Watts - 40 Volts, 150 μ s, 5%
Radar 890 - 1000 MHz

| | |
|---|---|
| <p>GENERAL DESCRIPTION</p> <p>The 0910-60M is an internally matched, COMMON BASE transistor capable of providing 60 Watts of pulsed RF output power at 150 μs pulse width, 5% duty factor across the band 890 to 1000 MHz. This hermetically solder-sealed transistor is specifically designed for P-Band radar applications. It utilizes gold metallization to provide high reliability.</p> | <p>CASE OUTLINE 55AW-1</p>  |
| <p>ABSOLUTE MAXIMUM RATINGS</p> <p>Maximum Power Dissipation @ 25°C 180 Watts</p> <p>Maximum Voltage and Current</p> <p>BVces Collector to Emitter Voltage 65 Volts BVebo Emitter to Base Voltage 3.5 Volts Ic Collector Current 8 Amps</p> <p>Maximum Temperatures</p> <p>Storage Temperature - 65 to + 200°C Operating Junction Temperature + 200°C</p> | |

ELECTRICAL CHARACTERISTICS @ 25 °C

| SYMBOL | CHARACTERISTICS | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|----------------------------|---------------------------|----------------------------|-----|-----|-----|-------|
| P_{out} | Power Out | Freq = 890 – 1000 MHz | 60 | | 84 | Watts |
| P_g | Power Gain | V _{cc} = 40 Volts | 8.0 | 8.5 | | dB |
| η_c | Collector Efficiency | Pin = 9.5 Watts | 40 | 45 | | % |
| P_d | Pulse Droop | Pulse Width = 150 μ s | | | 0.5 | dB |
| RI | Input Return loss | Duty Factor = 5% | -9 | | | dB |
| VSWR¹ | Load Mismatch Tolerance | | | | 3:1 | |
| VSWR_s | Load Mismatch - Stability | | | | 2:1 | |

Note 1: Pulse condition of 150 μ sec, 5%.

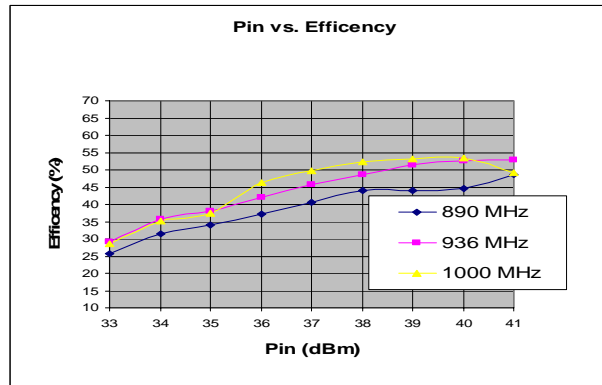
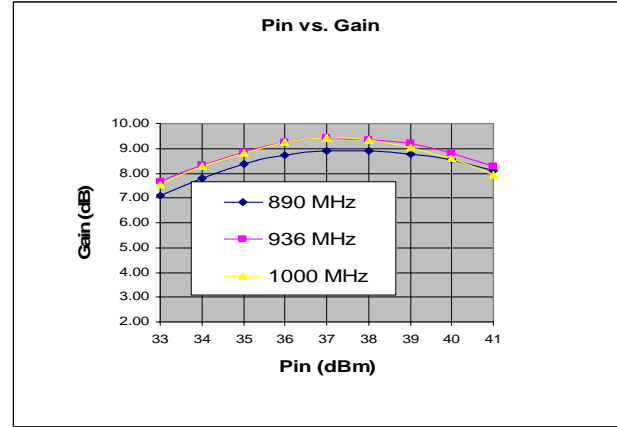
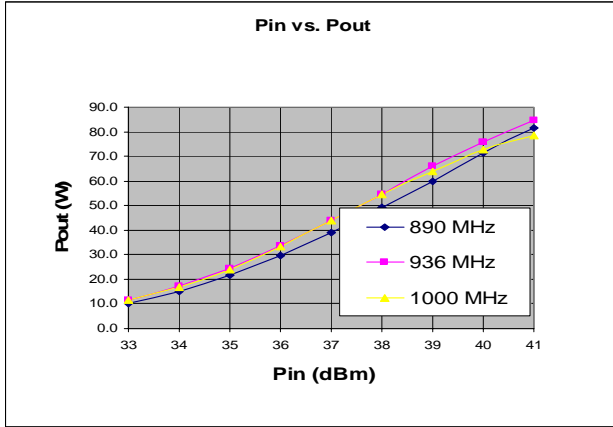
| | | | | | | |
|-----------------------------------|--------------------------------|-----------------------|----|--|-----|-------|
| Bvces | Collector to Emitter Breakdown | Ic = 40 mA | 65 | | | Volts |
| Ices | Collector to Emitter Leakage | Vce = 40 Volts | | | 10 | mA |
| Iebo | Emitter to Base Leakage | Vebo = 3.0 Volts | | | 8 | mA |
| θ_{jc}^1 | Thermal Resistance | Rated Pulse Condition | | | 1.0 | °C/W |

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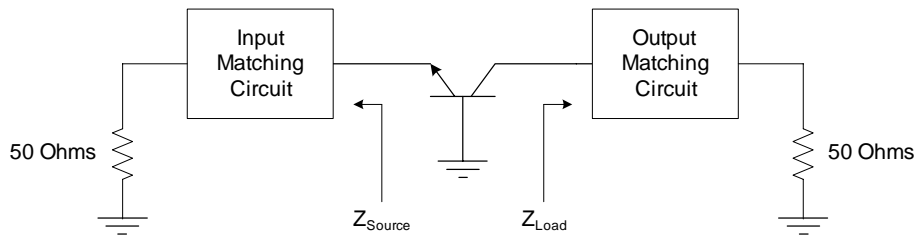


0910-60M

Performance Curves –



Impedance Information



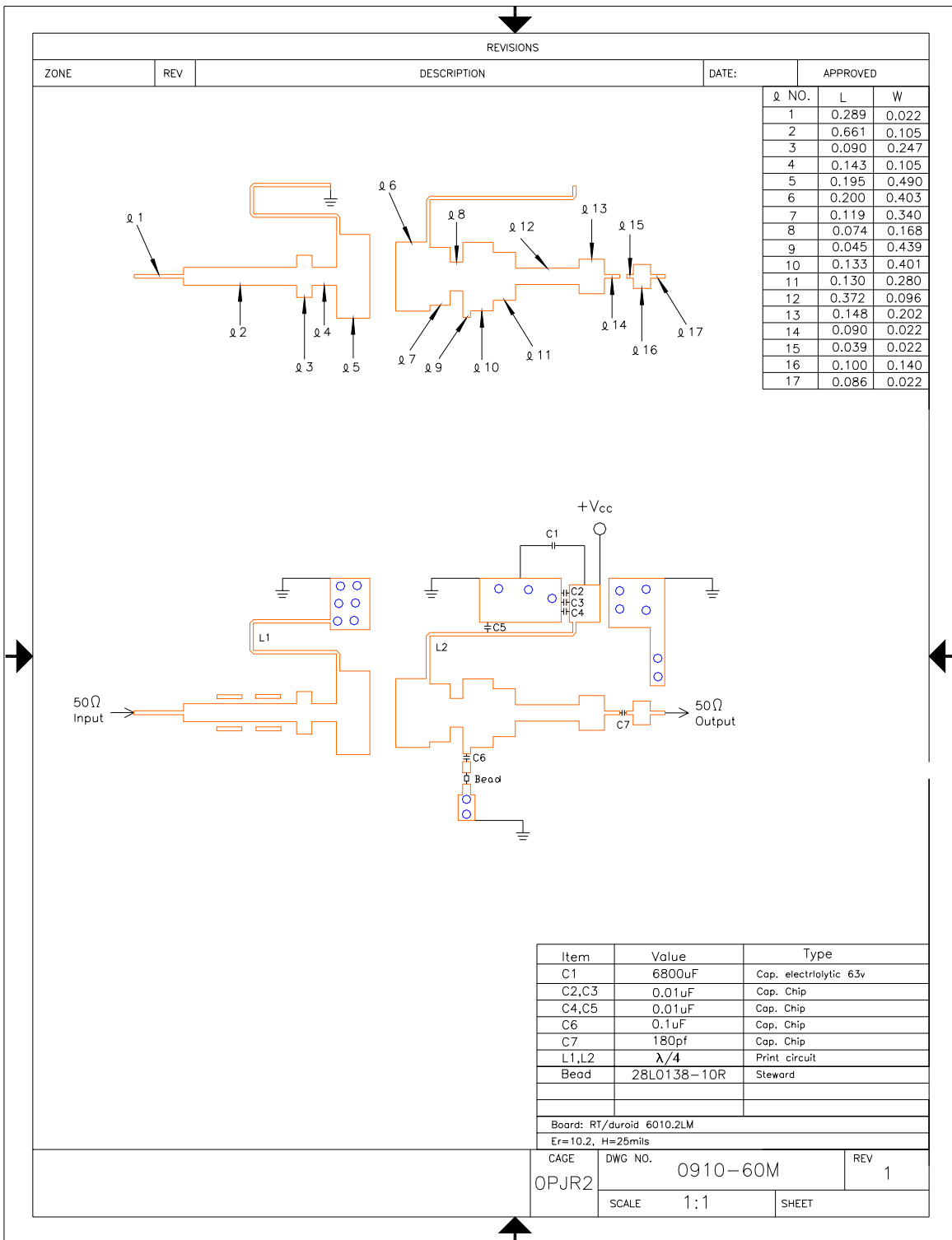
| Frequencies (MHz) | Z_{Source} (Ω) | Z_{Load} (Ω) ² |
|-------------------|---------------------------|--------------------------------------|
| 890 | 4.4-j4.0 | 2.8-j0.7 |
| 937 | 4.5-j3.3 | 2.9-j0.0 |
| 1000 | 4.7-j2.5 | 3.2+j0.95 |

Note 2: Z_{Load} exclusive of C5, C6 and bead on the test circuit



0910-60M

Test Circuit



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 Advanced Power Technology Inc. 3000 Oakmead Village Drive, Santa Clara, CA 95051-0808 Tel. 408 / 986-8031 Fax 408 /869-2324

