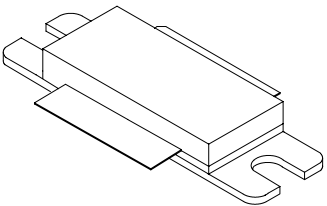




# 1011LD200

200 Watts, 32 Volts

Pulsed Avionics 1030 to 1090 MHz  
LDMOS FET

<p><b>GENERAL DESCRIPTION</b></p> <p>The 1011LD200 is a COMMON SOURCE N-Channel enhancement mode lateral MOSFET capable of providing 200 W<sub>pk</sub> of RF power from 1030 to 1090 MHz. The device is nitride passivated and utilizes gold metallization to ensure highest MTTF. The transistor includes input prematch for broadband capability. Low thermal resistance package reduces junction temperature, extends life.</p>	<p><b>CASE OUTLINE</b> <b>55QX-1</b> <b>(Common Source)</b></p> 
<p><b>ABSOLUTE MAXIMUM RATINGS</b></p> <p><b>Power Dissipation</b> Device Dissipation @25°C (P<sub>d</sub>)                      700 W</p> <p><b>Voltage and Current</b> Drain-Source (V<sub>DSS</sub>)    75V Gate-Source (V<sub>GS</sub>)    ± 20V</p> <p><b>Temperatures</b> Storage Temperature    -65 to +150°C Operating Junction Temperature                              +200°C</p>	

**ELECTRICAL CHARACTERISTICS @ 25°C**

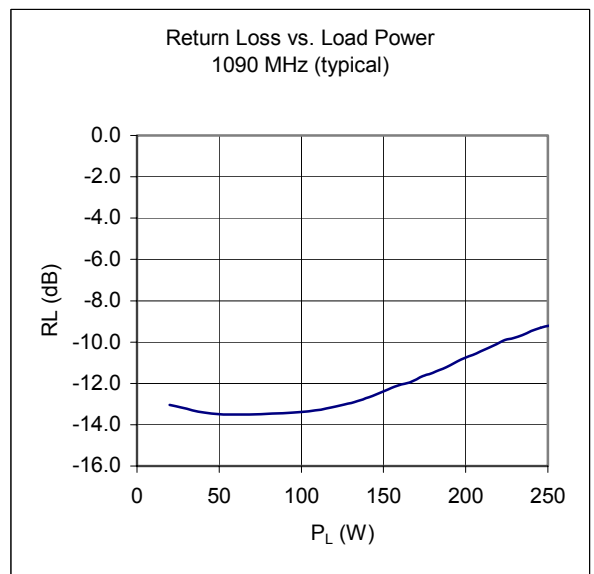
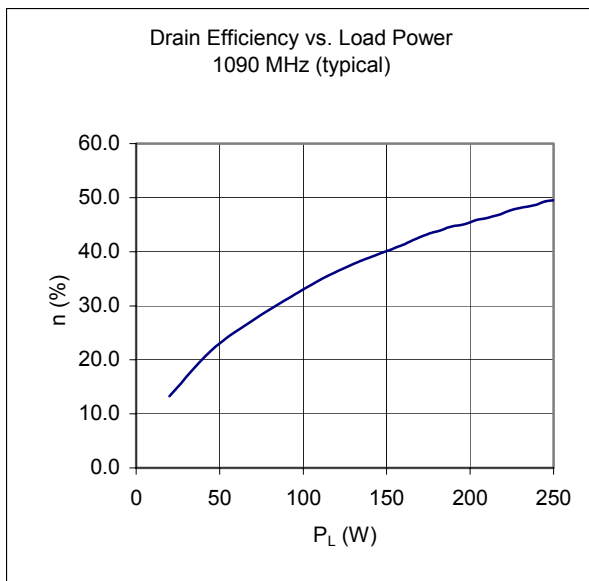
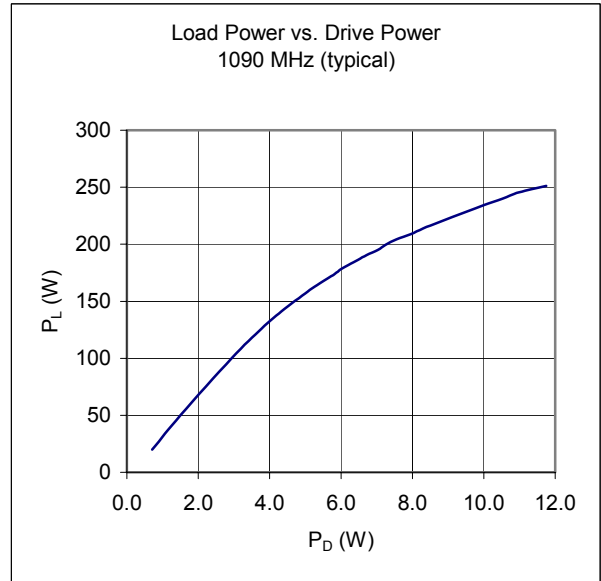
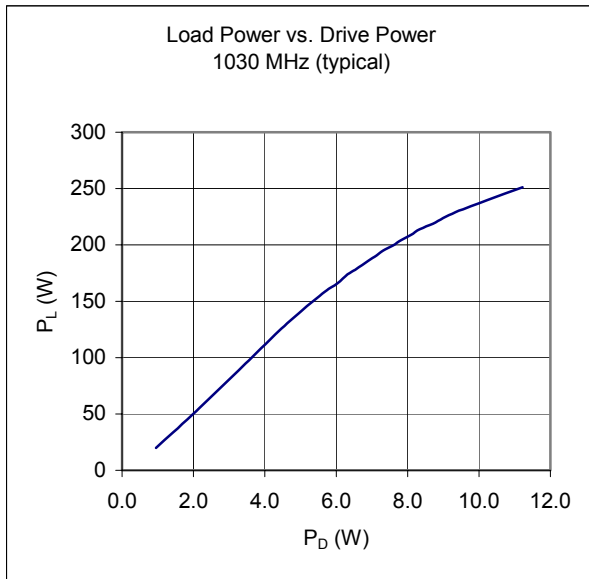
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
BV <sub>dss</sub>	Drain-Source Breakdown	V <sub>gs</sub> = 0V, I <sub>d</sub> = 20mA	75			V
I <sub>dss</sub>	Drain-Source Leakage Current	V <sub>ds</sub> = 38V, V <sub>gs</sub> = 0V			10	μA
I <sub>gss</sub>	Gate-Source Leakage Current	V <sub>gs</sub> = 10V, V <sub>ds</sub> = 0V			1	μA
V <sub>gs(th)</sub>	Gate Threshold Voltage	V <sub>ds</sub> = 10V, I <sub>d</sub> = 40 mA	3		6	V
V <sub>ds(on)</sub>	Drain-Source On Voltage	V <sub>gs</sub> = 10V, I <sub>d</sub> = 2A			0.3	V
g <sub>FS</sub>	Forward Transconductance	V <sub>ds</sub> = 10V, I <sub>d</sub> = 2A		2		S
θ <sub>JC</sub> <sup>1</sup>	Thermal Resistance				0.25	°C/W

**FUNCTIONAL CHARACTERISTICS @ 25°C, V<sub>ds</sub> = 32V, I<sub>dq</sub> = 500mA**

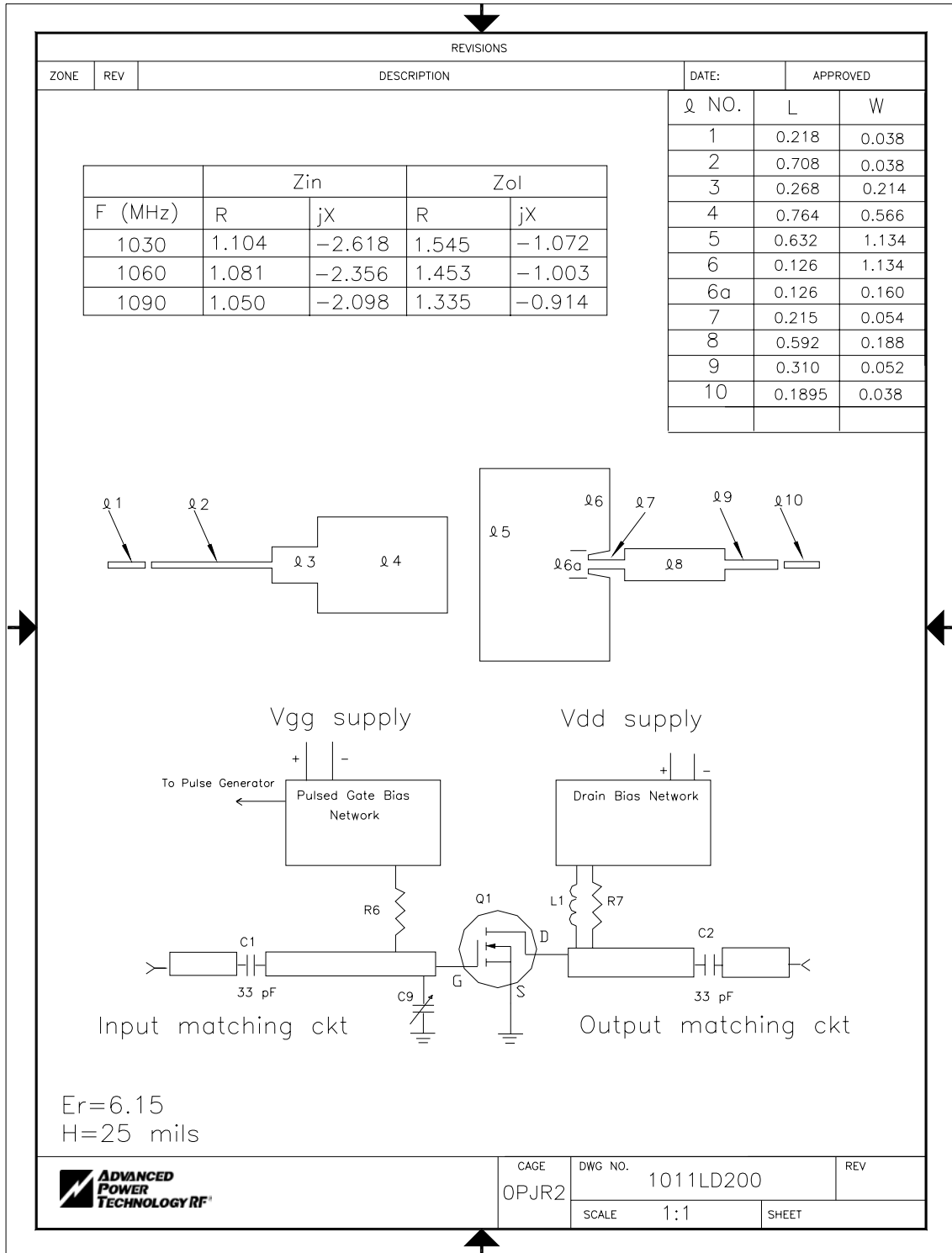
G <sub>PS</sub>	Common Source Power Gain	Pulse width = 32 μs, LTDC=2%	13	15		dB
P <sub>d</sub>	Pulse Droop	F=1030/1090 MHz, P <sub>out</sub> = 200W			0.5	dB
η <sub>d</sub>	Drain Efficiency	F = 1030 MHz, P <sub>out</sub> = 200W	43			%
ψ	Load Mismatch	F = 1090 MHz, P <sub>out</sub> = 200W			3:1	

NOTES: 1. At rated output power and pulse conditions

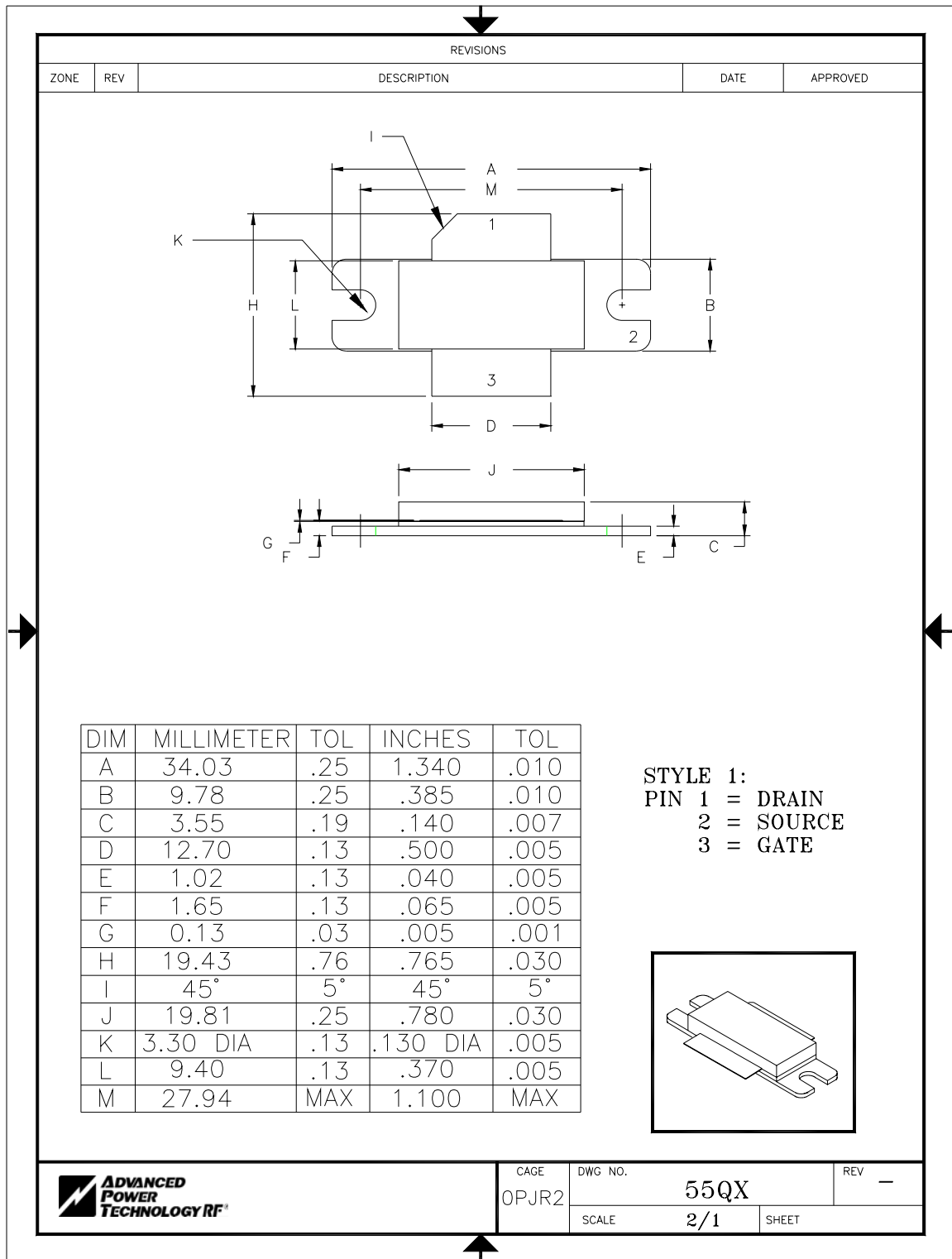
Rev. B - Apr 2004



# 1011LD200



# 1011LD200



CAGE OPJR2	DWG NO. <b>55QX</b>	REV —
SCALE 2/1	SHEET	