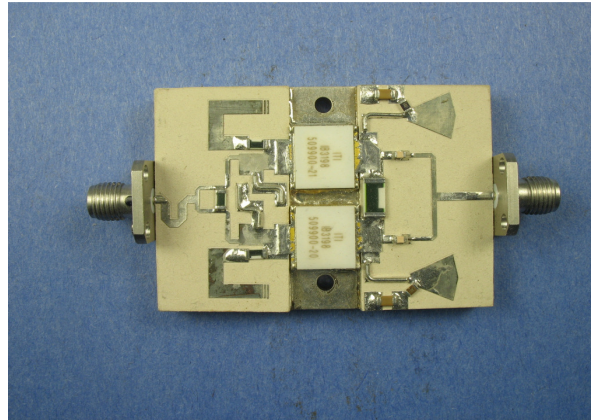


**S-Band Radar Pallet**

Part number IBP3135MH200 is a 50 Ω matched high power pulsed radar pallet amplifier for S-Band radar systems operating over the instantaneous bandwidth of 3.1-3.5 GHz. The pallet amplifier supplies a minimum of 190 watts (Typical 200 watts) of peak pulse power under the conditions of 100μs pulse width and 10% duty cycle. All units are 100% screened for large signal RF parameters.



**Silicon Bipolar**

- Ultra-high  $f_T$

**Class C Operation**

- High Efficiency

**Common Base Configuration**

- Single Power Supply

**Gold Metal**

- Maximum Reliability

**Emitter Ballasting**

- Optimum Thermal Distribution

**Impedance Matched to 50Ω**

- Ease of Use

**Pallet Carrier**

- Ni Plated Copper Carrier
- High Er PCB

**BeO Based Transistor Package**

- Unmatched Thermal Reliability

**US Patent Number**

- 6181200B1

*TYPICAL DATA*

*TYPICAL DATA*

*TYPICAL DATA*

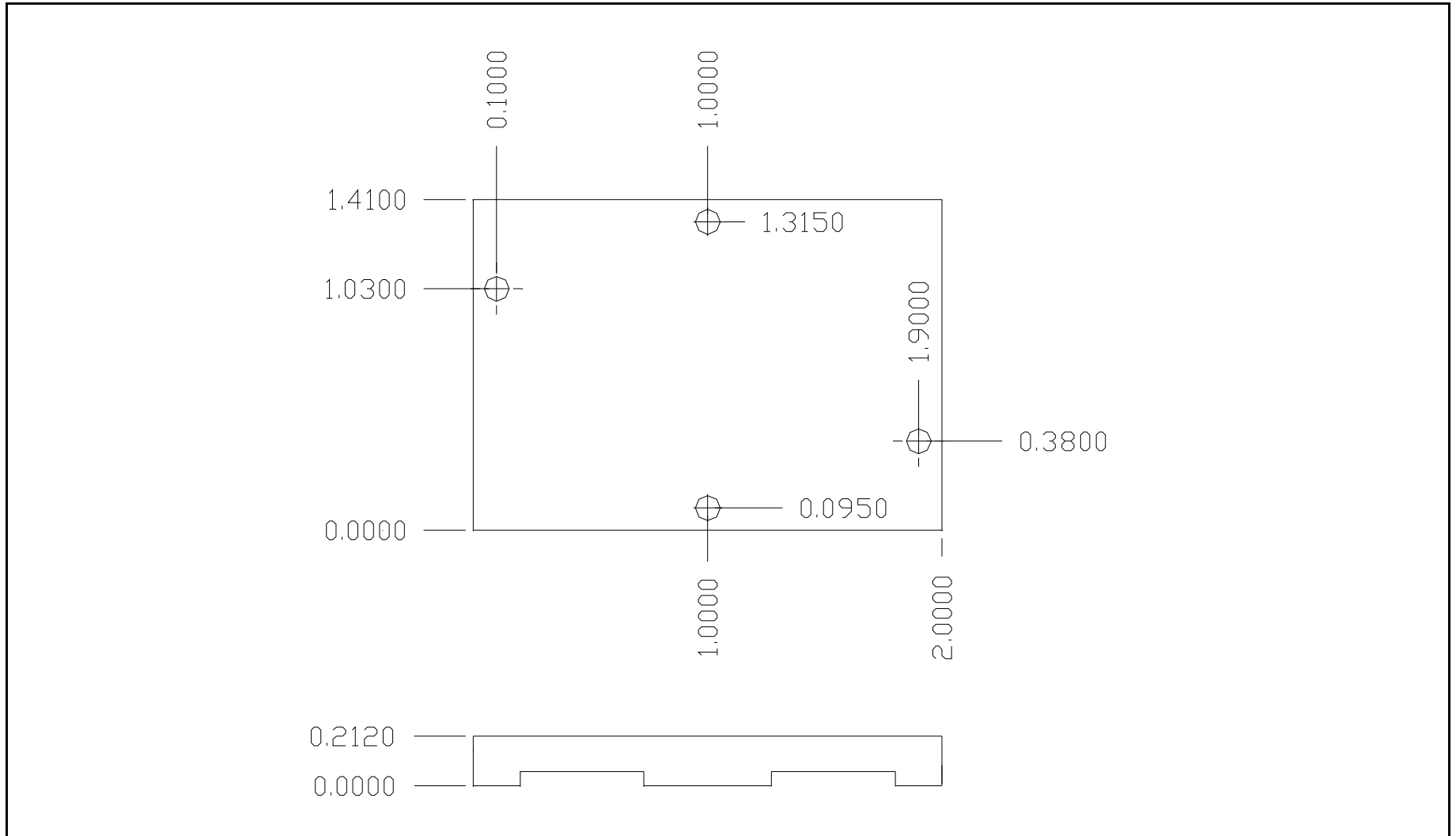
Device	Freq (GHz)	V <sub>CC</sub> (V)	P <sub>OUT</sub> (W)	IRL (dB)	P <sub>IN</sub> (W)	G <sub>P</sub> (dB)	I <sub>C</sub> (A)	n <sub>C</sub> (%)	Droop (dB)
D3919	3.10	36	238	8.5	32.0	8.72	14.6	45.1	0.07
	3.30	36	231	14.0	32.0	8.59	15.6	41.1	-0.06
	3.50	36	227	12.5	32.0	8.50	14.1	44.8	-0.21

Pulse Format = 100us, 10%

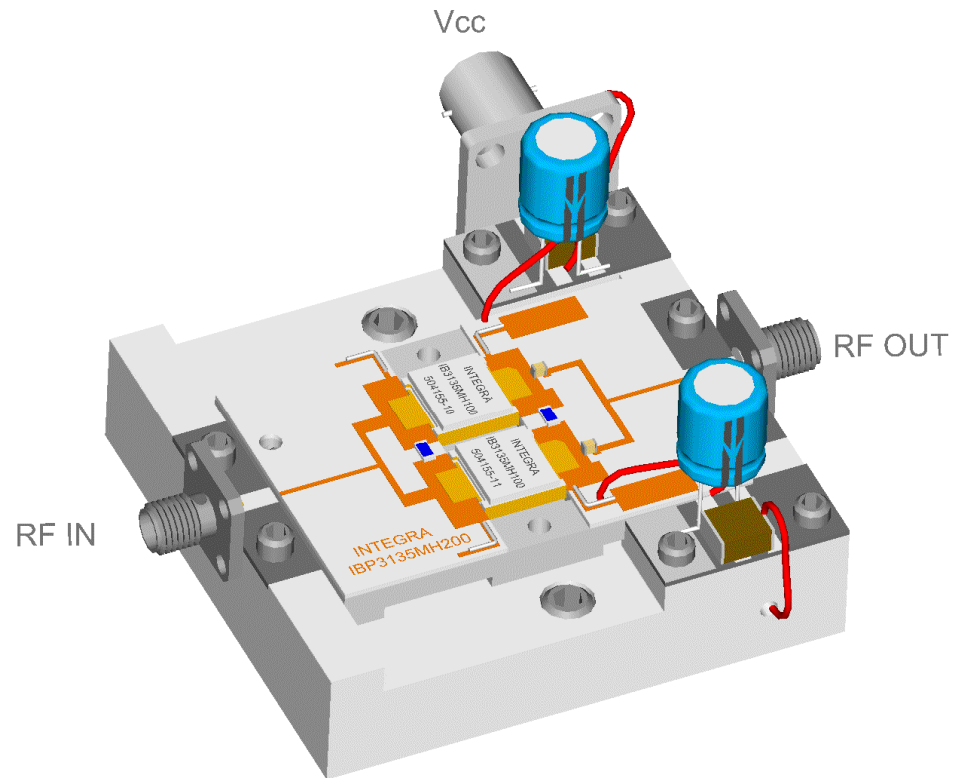
**RF ELECTRICAL CHARACTERISTICS**

Screen	Parameter	Symbol	Min	Max	Units	Test Conditions
100%	Input Return Loss	IRL	8	--	dB	$V_{CC}=36V$ , $P_{IN}=32W$ , Pulse = Note 2, $T_F=25\pm 5^\circ C$ , $F=F1, F2, F3$
100%	Output Power	$P_{out}$	190	--	W	$V_{CC}=36V$ , $P_{IN}=32W$ , Pulse = Note 2, $T_F=25\pm 5^\circ C$ , $F=F1, F2, F3$
100%	Power Gain	$G_P$	7.73	--	dB	$V_{CC}=36V$ , $P_{IN}=32W$ , Pulse = Note 2, $T_F=25\pm 5^\circ C$ , $F=F1, F2, F3$
100%	Collector Efficiency ( $P_o/I_c/V_{CC}$ )	$N_C$	35	--	%	$V_{CC}=36V$ , $P_{IN}=32W$ , Pulse = Note 2, $T_F=25\pm 5^\circ C$ , $F=F1, F2, F3$
100%	Pulse Amplitude Droop	D	--	0.6	dB	$V_{CC}=36V$ , $P_{IN}=32W$ , Pulse = Note 2, $T_F=25\pm 5^\circ C$ , $F=F1, F2, F3$
100%	Gain Flatness	GF	--	1.0	dB	Calculate from min/max gains at frequencies F1, F2, F3
100%	Delta Insertion Phase Variation	d-IP	-20	+20	deg	$V_{CC}=36V$ , $P_{IN}=32W$ , Pulse = Note 2, $T_F=25\pm 5^\circ C$ , $F=F1, F2, F3$
100%	Stability into 1.5:1 VSWR	VSWR-S	1.5:1	--	--	$V_{CC}=36V$ , $P_{IN}=32W$ , Pulse = Note 2, $T_F=25\pm 5^\circ C$ , $F=F1, F2, F3$ . Rotate 1.5:1 output VSWR through 360° phase. No oscillatory or pulse break-up characteristics allowed on detected output pulse.
100%	Load Mismatch Tolerance	LMT	2:1	--	--	$V_{CC}=36V$ , $P_{IN}=32W$ , Pulse = Note 2, $T_F=25\pm 5^\circ C$ , $F=F1, F2, F3$ . Rotate 2:1 output VSWR through 360° phase. Survival.
Note 1	F1 = 3.10 GHz, F2=3.30 GHz, F3=3.50 GHz.					
Note 2	Pulse format = 100µs, 10%					
Note 3	$T_F$ = Device flange temperature.					
Note 4	Screen 'BD' = parameter qualified By Design.					

**PALLET DIMENSIONAL OUTLINE DRAWING**



50 OHM TEST FIXTURE



**DEFINITIONS**

<b>Data Sheet Status</b>	
Proposed Specification	This data sheet contains proposed specifications.
Preliminary Specification	This data sheet contains specifications based on preliminary measurements and data.
Product Specification	This data sheet contains final product specifications.
<b>Maximum Ratings</b>	
Stress above one or more of the maximum ratings may cause permanent damage to the device. These are maximum ratings only and operation of the device at these or at any other conditions above those given in the characteristics sections of the specification is not implied. Exposure to maximum values for extended periods of time may affect device reliability.	

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