

180W PSM - PLUG AND PLAY

- For S-Band Pulsed Radar Application

180 Watts - 100 μ s, 10%, 36V
 S-Band Pulsed Radar 3100 - 3400 MHz

- Easy To Use – 50 Ω Plug-and-Play
- Reduce Design Cycle Time
- Improve System Performance
- Reduce System Size and Components

GENERAL DESCRIPTION

The 3134-180P is a 50 ohm matched Power Solution Module (PSM) for S-Band pulsed Radar systems capable of providing 180 Watts of pulsed RF output power at one hundred microsecond pulse width ten percent duty factor across the band 3100-3400 MHz. This PSM is designed with plug and play concept which extremely user friendly and requires no additional tuning and impedance matching from the customer. Mechanical Size is 2.75" x 1.5" x 0.21"

ELECTRICAL CHARACTERISTICS @ 25 °C, Pulse Width=100us, 10%

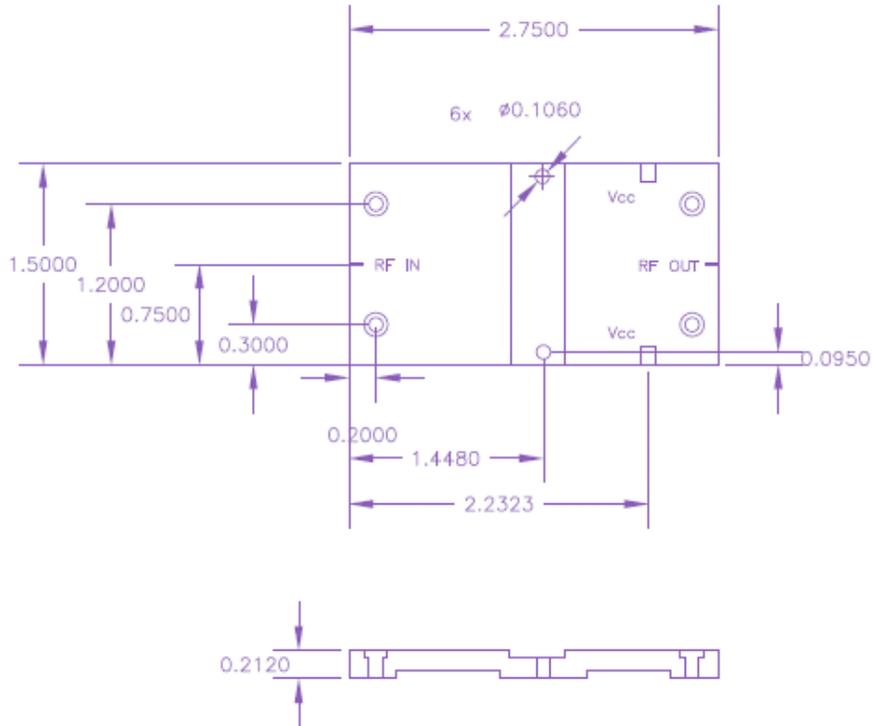
Symbol	Characteristics	Test Conditions	Min	Typ	Max	Units
P _{In}	Input Power	V _{cc} =36V, P _{out} =180W, Freq=3.1 to 3.4 GHz	23.0	30.1	34.3	W
G _p	Power Gain	V _{cc} =36V, P _{out} =180W, Freq=3.1 to 3.4 GHz	7.2	7.8	9.0	dB
η_c	Collector Efficiency	V _{cc} =36V, P _{out} =180W, Freq=3.1 to 3.4 GHz	35	40		%
Droop	Pulse Droop	V _{cc} =36V, P _{out} =180W, Freq=3.1 to 3.4 GHz		0.2	0.6	dB
R/L	Input Return Loss	V _{cc} =36V, P _{out} =180W, Freq=3.1 to 3.4 GHz	-12			dB
VSWR-T	Load Mismatch Tolerance	V _{cc} =36V, P _{out} =180W, Freq=3.1 to 3.4 GHz			1.5:1	
Θ_{jc}	Thermal Resistance	Pulse Width=100uS, Duty=10%			0.30	°C/W

Typical Test Data:

Frequency	P _{out} (W)	P _{in} (W)	I _c (A)	RL (dB)	N _c (%)	G (dB)
3100 MHz	180	30.1	1.25	-17	40	7.8
3200 MHz	180	27.5	1.18	-22	42	8.2
3300 MHz	180	25.5	1.21	-19	41	8.5
3400 MHz	180	30.4	1.16	-14	43	7.7

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3134-180P PSM Outline Drawing



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