

2731-200P

200W PSM - PLUG AND PLAY

- For S-Band Pulsed Radar Application

200 Watts - 200 μ s, 10%, 36V
 S-Band Pulsed Radar 2700 - 3100 MHz

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

GENERAL DESCRIPTION

The 2731-200P is a 50 ohm matched Power Solution Module (PSM), consists of two common base high power transistors, for S-Band pulsed Radar systems. This PSM is capable of providing 200 Watts of pulsed RF output power at two hundreds microsecond pulse width ten percent duty factor across 2700-3100 MHz. This PSM is designed with the plug-n-play concept which is extremely user friendly and requires no additional tuning and impedance matching from the customer.

Mechanical Size is 2" x 1.41" x 0.21"

ELECTRICAL CHARACTERISTICS @ 25 °C, Pulse Width=200us, 10%

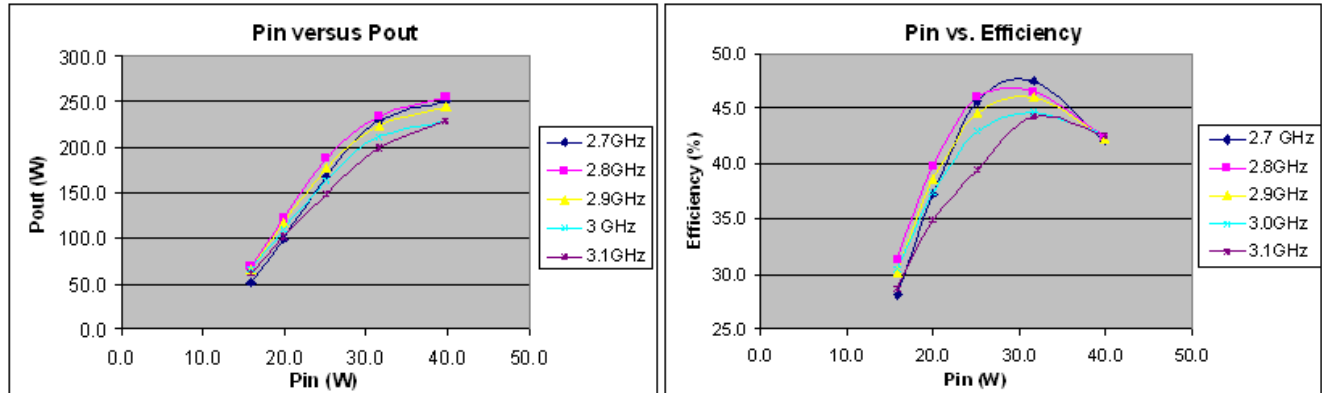
Symbol	Characteristics	Test Conditions	Min	Typ	Max	Units
P _{in}	Input Power	V _{cc} =36V, P _{out} =200W, Freq=2.7 to 3.1 GHz	27.0	32.0	35.6	W
G _p	Power Gain	V _{cc} =36V, P _{out} =200W, Freq=2.7 to 3.1 GHz	7.5	8.0	8.7	dB
η_c	Collector Efficiency	V _{cc} =36V, P _{out} =200W, Freq=2.7 to 3.1 GHz	40	45		%
Droop	Pulse Droop	V _{cc} =36V, P _{out} =200W, Freq=2.7 to 3.1 GHz		0.2	0.6	dB
R/L	Input Return Loss	V _{cc} =36V, P _{out} =200W, Freq=2.7 to 3.1 GHz	7			dB
VSWR-T	Load Mismatch Tolerance	V _{cc} =36V, P _{out} =200W, Freq=2.7 to 3.1 GHz			2:1	
Θ_{jc}	Thermal Resistance	Pulse Width=200uS, Duty=10%			0.30	°C/W

Typical Test Data:

Frequency	P _{out} (W)	P _{in} (W)	I _c (I)	RL (dB)	N _c (%)	G (dB)
2700 MHz	200	30.2	1.25	-9	44	8.2
2900 MHz	200	33.1	1.22	-10	45	8.0
3100 MHz	200	33.2	1.25	-16	44	7.8

Microsemi reserves the right to change, without notice, the specifications and information contained herein. To verify the current version please check our website at www.microsemi.com, email to psm@microsemi.com, or contact our factory direct. Microsemi PPGR 3295 Scott Blvd, Suite 150, Santa Clara, CA 95054 Tel. 408-986-8031

Typical RF Performance Curves



2731-200P PSM Outline Drawing

