

# 2731-200P

## 200W PSM - PLUG AND PLAY

- For S-Band Pulsed Radar Application

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

- Easy To Use – 50  $\Omega$  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"

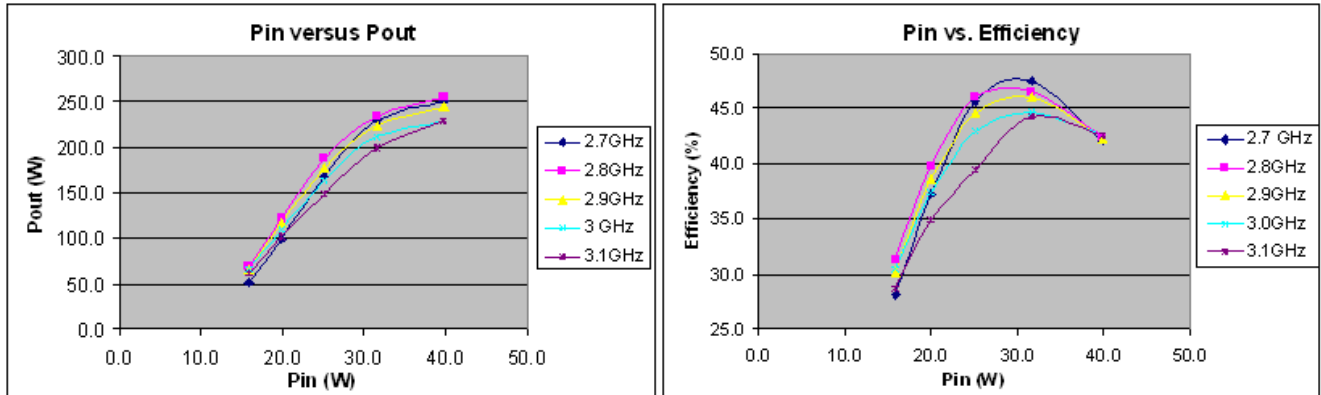
### ELECTRICAL CHARACTERISTICS @ 25 °C, Pulse Width=200us, 10%

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

### Typical Test Data:

Frequency	P <sub>out</sub> (W)	P <sub>in</sub> (W)	I <sub>c</sub> (I)	RL (dB)	N <sub>c</sub> (%)	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

**Typical RF Performance Curves**



**2731-200P PSM Outline Drawing**

