



# 3134-180P

## 180W PSM - PLUG AND PLAY

- For S-Band Pulsed Radar Application

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

- Easy To Use – 50  $\Omega$  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), consists of two common base high power transistors, for S-Band pulsed Radar application. This PSM is 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 is extremely user friendly and requires no additional tuning and impedance matching from the customer. Mechanical Size is 2.4" x 1.4" x 0.21"

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

Symbol	Characteristics	Test Conditions	Min	Typ	Max	Units
P <sub>In</sub>	Input Power	V <sub>cc</sub> =36V, P <sub>out</sub> =180W, Freq=3.1 to 3.4 GHz	22.5	25.5	28.5	W
G <sub>p</sub>	Power Gain	V <sub>cc</sub> =36V, P <sub>out</sub> =180W, Freq=3.1 to 3.4 GHz	8.0	8.5	9.0	dB
$\eta_c$	Collector Efficiency	V <sub>cc</sub> =36V, P <sub>out</sub> =180W, Freq=3.1 to 3.4 GHz	40	44		%
Droop	Pulse Droop	V <sub>cc</sub> =36V, P <sub>out</sub> =180W, Freq=3.1 to 3.4 GHz		0.2	0.6	dB
R/L	Input Return Loss	V <sub>cc</sub> =36V, P <sub>out</sub> =180W, Freq=3.1 to 3.4 GHz	-8			dB
VSWR-T	Load Mismatch Tolerance	V <sub>cc</sub> =36V, P <sub>out</sub> =180W, Freq=3.1 to 3.4 GHz			2.0:1	
$\Theta_{jc}$	Thermal Resistance	Pulse Width=100uS, Duty=10%			0.30	°C/W

### Typical Test Data:

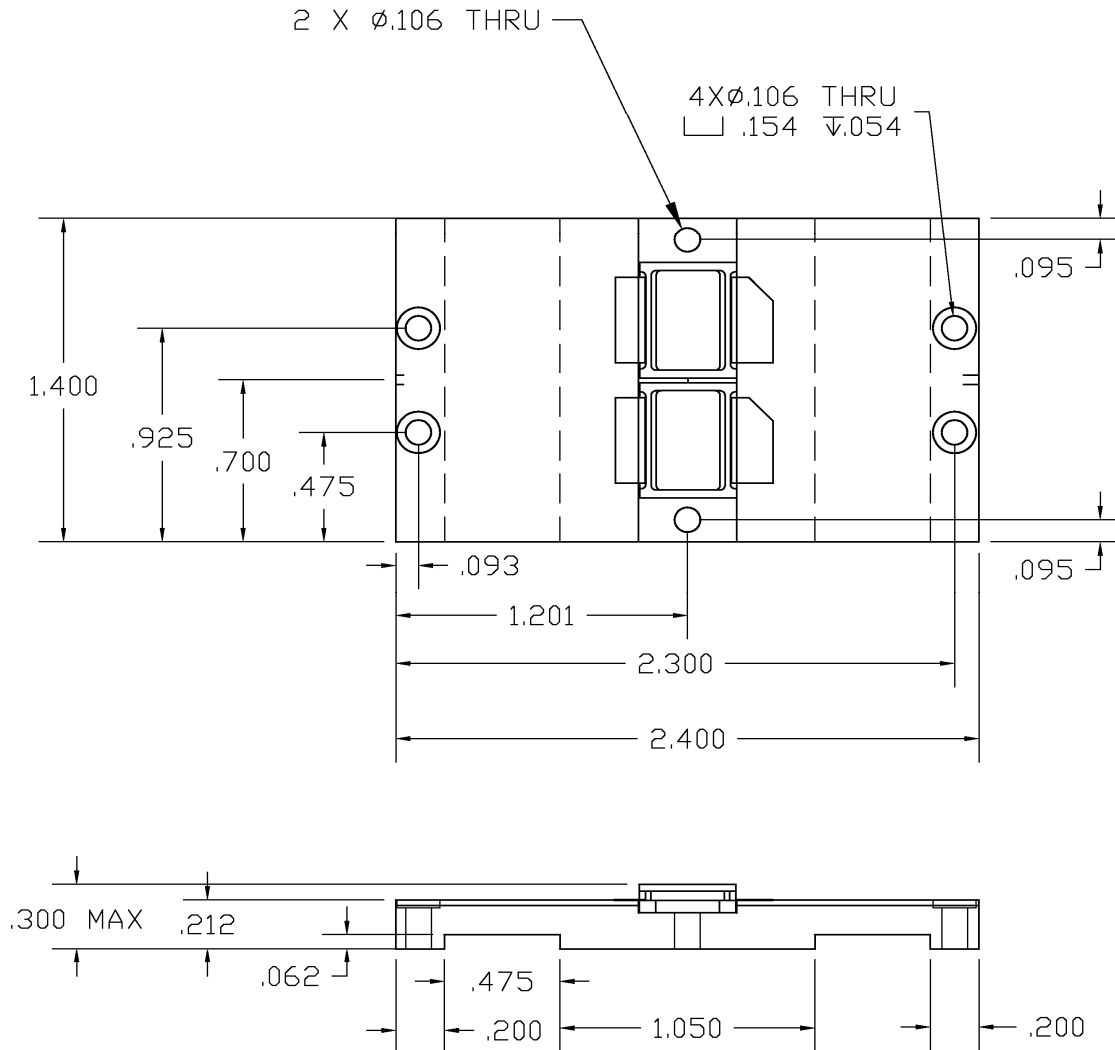
Frequency	P <sub>out</sub> (W)	P <sub>in</sub> (W)	I <sub>c</sub> (A)	RL (dB)	N <sub>c</sub> (%)	G (dB)
3100 MHz	180	26.6	1.13	-10	44	8.3
3200 MHz	180	25.1	1.11	-16	45	8.6
3300 MHz	180	25.1	1.13	-20	44	8.6
3400 MHz	180	26.6	1.10	-15	45	8.3

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# 3134-180P

## 3134-180P PSM Outline Drawing



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