

PREMIER DEVICES

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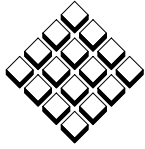
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MODEL PD28-192A-50-15CDPA PCS BAND POWER AMPLIFIER 15 WATTS CDMA



FEATURES

- ☐ High reliability
- ☐ High efficiency state-of-the-art LDMOS design
- ☐ Compact package – only 4"W x 8"D x 0.95"H (see drawing)
- ☐ Ideal for PCS band repeater applications
- ☐ Available in production quantities 8 weeks ARO



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1. Electrical Specifications

Parameter	Specifications	Remarks
Frequency Range	1930-1990 MHz	PART NO: PD28-192A-50-15CDPA
Pout, average	41.8 dBm (15 Watts) min.	
RF Gain	50 $\pm$ 1.0 dB	@ 1930-1990 MHz, output 15W, +25°C ambient
RF Gain flatness	$\pm$ 1.0 dB max peak to peak	
Gain Variation over the operating temperature range (compared with 25°C ambient)	$\pm$ 1.5 dB max	@ -20 °C, +80 °C baseplate temp.
Intermodulation Distortion & Spurious Emissions Performance optimized @ 1967.5 $\pm$ 15 MHz	-47 dBc min @ Fc $\pm$ 885 KHz /RBW 30KHz -53 dBc min @ Fc $\pm$ 1.25 MHz /RBW 30KHz -70 dBc min @ Fc $\pm$ 2.25 MHz /RBW 30KHz and, all frequencies over the above specified bands	@15W @ Operating normal voltage @ Operating temp.: -20 to +80°C baseplate temp @ Test source: HP E4432B 9ch CDMA mode
Second Harmonic	-45 dBc min.	
Third Harmonic	-55 dBc min.	
Input/Output Return Loss	15 dB min. (50 ohms)	
Output Protection	Isolator	
DC Input Power	+27 V $\pm$.5V	24V $\pm$ 0.5V emergency: Gain variation 1.5 dB max compared with normal voltage
DC Current @ 27V	5.5 A max @ 27V	
Cooling	Conduction through base plate	
Package Outline	Package Style C-100	See Drawing



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2. Environmental Specifications

Operating Temperature	-20°C to +80°C	Base Plate Temperature
Storage Temperature	-30°C to +90°C	Base Plate Temperature
Operating Humidity	20 to 80 % RH	Non-condensing
Storage Humidity	5 to 95 % RH	Non-condensing

3. I/O Interfaces

Control & Alarm (9 Pin D-sub Male Connector)

Pin Number	Function	Description	Remarks
1	Over Power Alarm Output (shut-down & restart)	If Output exceeds 47 ± 1.0 dBm, the Over Power Alarm will occur and HPA will disable automatically. The HPA will re-start automatically after 2-3 seconds.	Normal: TTL Low (0.4V max.) Alarm: TTL High (2.4V min.)
2	High Temperature Alarm Output (shut-down & restart)	If heat sink temperature exceeds $90 \pm 5^\circ\text{C}$, the High Temperature Alarm will occur and HPA will disable automatically. The HPA will re-start after temperature drops to 70°C .	
3	VSWR Alarm Output	If Reverse Power exceeds 33 ± 1.5 dBm, the VSWR Alarm will occur, but HPA will not be disabled.	
4	N/C		
5	N/C		
6	Summary Alarm	TTL Low when HPA is enabled and there are no faults. TTL High when any fault occurs.	
7	HPA On/Off	When TTL High (2.4V - 5.0V) enters into this Pin, HPA should be turned off. When TTL Low (0V - 0.8V) enters into this Pin, HPA should be turned on.	
8	Power Detection	$4.0\text{ V} \pm 1.0\text{ V}$ at 42 dBm HPA output	
9	GND	Ground	

DC Power Connector (3 Pin D-sub male connector)

Pin #	Function	Description
1	+27 Vdc	+27 Vdc
2	Ground	Ground
3	N/C	N/C

RF IN/OUT Connector (SMA female/SMA female connector)

Pin #	Function	Description
	RF Input	RF signal input



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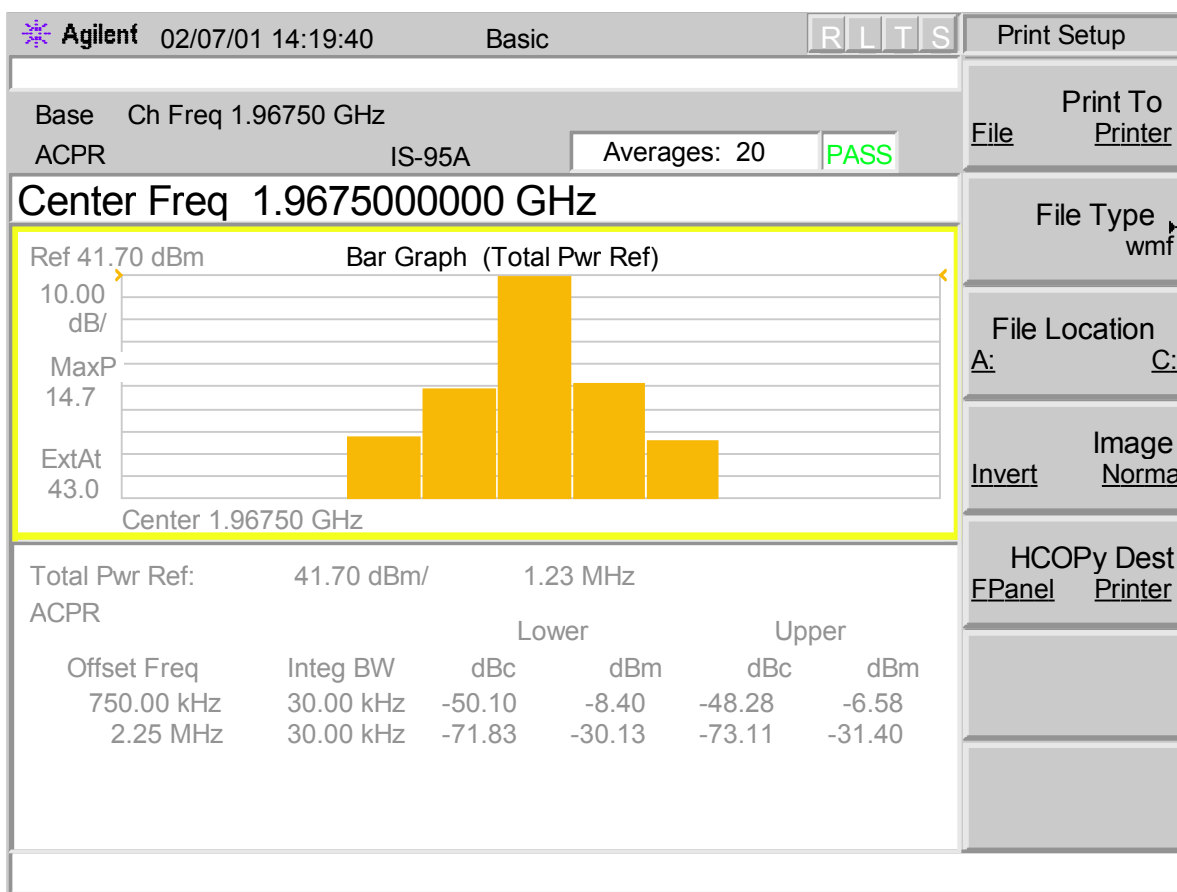
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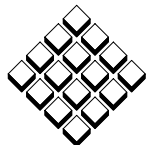
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PCS BAND POWER AMPLIFIER 15 WATTS CDMA

TYPICAL PERFORMANCE



S/N: 8141 PDC-192A-50-15CDPA 2-8-01



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PCS BAND POWER AMPLIFIER 15 WATTS CDMA

PACKAGE C-100

