

DBS AMPLIFIERS

PAL20a-T AUTOGAIN

APPLICATION

SITUATION

The DBS signal is needed in multiple or distant locations and a constant known output level is required over a range on input levels.

SOLUTION

Model PAL20a-T powers a DBS dish, amplifies the DBS signals, pre-emphasizes high frequencies to compensate for cable slope and automatically adjusts signal output level for -20 dBm or -15 dBm per transponder (for 32 equal amplitude input transponders).

RELATED CONSIDERATIONS

Model PAL20a-T has a 250 - 2150 MHz frequency range which supports DISH network, DirecTV Phase III, (3 LNB) systems and DirecTV AT9/AU9 (5 LNB) systems.

FEATURES

- MADE IN USA3 YR Warranty
- Indoor/Outdoor Case:Diecast Aluminum
- Powers LNBs: short circuit protected
- Automatic Gain preset for -20 dBm (32 CH)selectable -15 dBm
- Slope Compensation.....200 ft RG-6

SPECIFICATIONS

RF Specifications Typical QC Limit

Passband Gain @ inputs below AGC threshold		
250 MHz	24 dB	22 dB
950 MHz	27 dB	26 dB
1450 MHz	29 dB	28 dB
2150 MHz	32 dB	30 dB
2400 MHz	30 dB	28 dB
Passband Flatness		
Any 24 MHz band	0.1 dB	0.2 dB
Slope Compensation		
950 MHz to 2150MHz	6 dB	4 dB
Input Return Loss	14 dB	12 dB
Output Return Loss	12 dB	10 dB

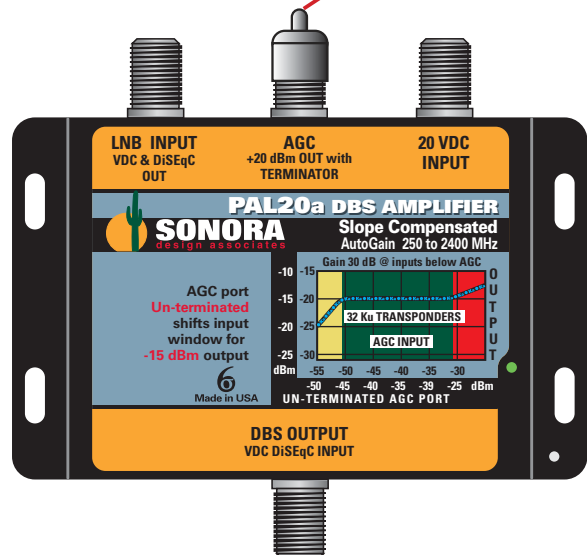


Unit may be line powered via DBS Output. Power & 22 kHz passes to Input. Model HRFPI inserts power on coax using the included power transformer.

DESCRIPTION

DBS (DirecTV or DISH) 250 to 2400 MHz high power automatic gain amplifier. (AGC stands for Automatic Gain Control)

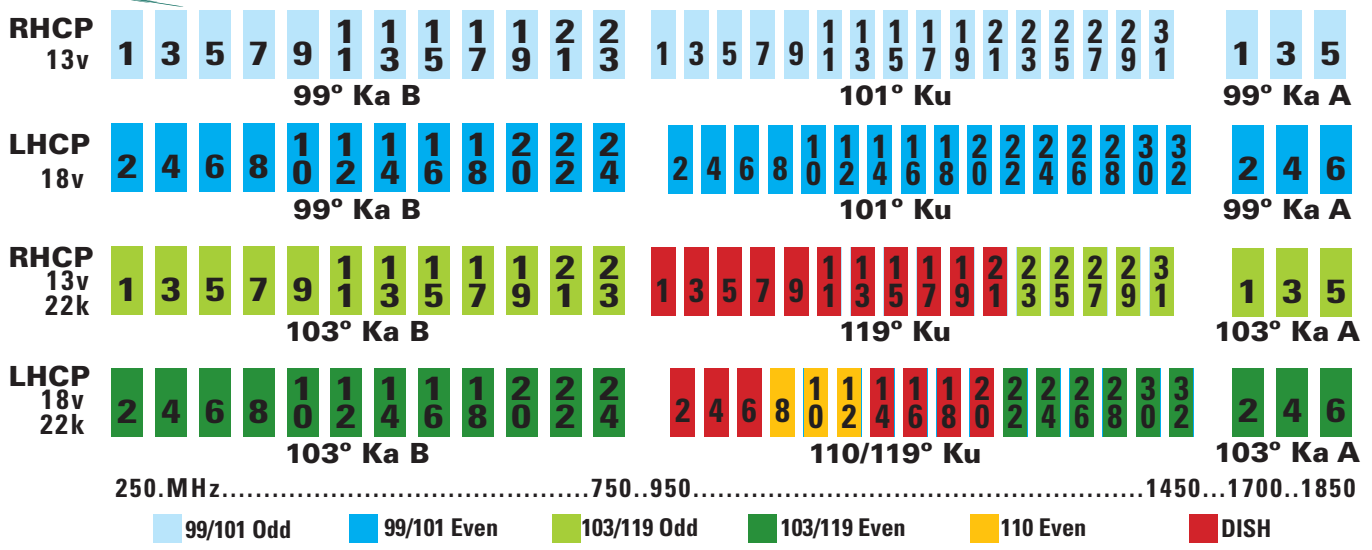
Model PAL20a-T is preset for an output of -20 dBm per transponder for inputs from -31 to -51 dBm. Remove terminator for an output of -15 dBm inputs from -26 to -46 dBm.



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DirecTV 6 Satellite Ka / Ku Switch Plan



Five Satellite Stacked Ka/Ku

DirecTV expanded their bandwidth by supplementing the DBS Ku satellites with Ka band satellites. The AU9S antenna receives and stacks the six satellites on four bands from 250 MHz to 1900 MHz.

SPECIFICATIONS

- RF Specifications** Typical QC Limit
- Preset AGC Output (32 transponders) -20 dBm
 - -15 dBm with AGC port Un-terminated
 - AGC Window@ -20 dBm out-31 to -51 dBm
 -@ -15 dBm out-26 to -46 dBm
 - (for 32 equal amplitude Ku Transponders)
 - Noise Figure..... 7 dB @ 2150 MHz
 - Power Specifications**
 - Voltage..... 9 to 24 VDC
 - Current draw (amp only) 100 mA
 - Powering options:..... "F" Power Port
 - or RF Output In-line Power (requires HRFPI)
 - PS201000 required if amp is between switch and dish**
 - Wall transformer 20 Vdc, 1000 mA
 - short circuit protected
 - Mechanical Specifications**
 - Diecast Aluminum 4" L, 3.5" W, 7/8" H
 - Connector Spacing..... 1 "
 - Weight 1 lb (0.45 kg)
 - Master Carton (16 units).....20" x 10" x 10"
 - Master Carton Weight.....17 lbs (8 kg)
 - Environmental Specifications**
 - Operating Environment Indoor / Outdoor

