TELEDYNE
MICROWAVE SOLUTIONS
Everywhereyoulook™

Voltage-Controlled AGC Amplifier 5 to 300 MHz

Technical Data

AGC-330

Features

- **Frequency Range: 5 to 300 MHz**
- **Single Package**
- **Wide AGC: 36 dB (Typ)**
- **22 dB Gain (Typ)**

Applications

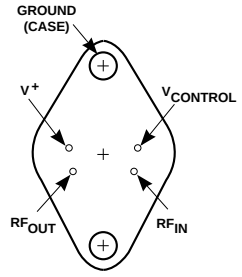
- **Open or Closed Loop Gain Control**
- **Receiver Output Gain Control**
- **Transmitter Output Leveling Control**

Description

The AGC-330 combines two-stage thin-film bipolar RF amplifier using HP transistors, and PIN diodes with 0 to 5-volts DC control to allow over 36 dB gain variation. Resistive feedback assures stable gain over temperature, and the bias input voltage is RF protected through the use of bypass capacitors and choke decoupling. The amplifier is housed in a TO-3 hermetic package.

Pin Configuration

TO-3



Maximum Ratings

Parameter	Maximum
DC Voltage	+17 Volts
Continuous RF Input Power	+13 dBm
Operating Case Temperature	–55 to +125°C
Storage Temperature	–62 to +150°C
"R" Series Burn-In Temperature	+125°C

Thermal Characteristics[1]

θ_{JC}	105/105°C/W
Active Transistor Power Dissipation	105/180 mW
Junction Temperature Above Case Temperature	11/19°C

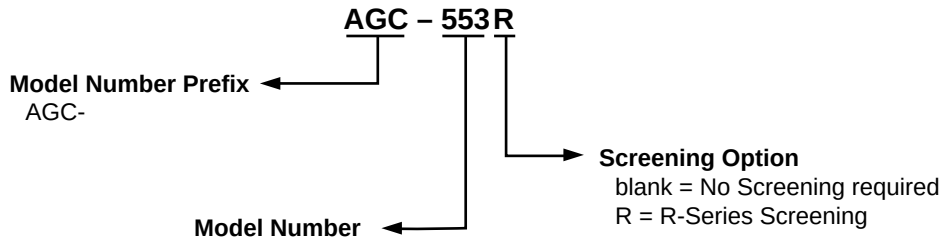
Weight: (typical) 14.5 grams

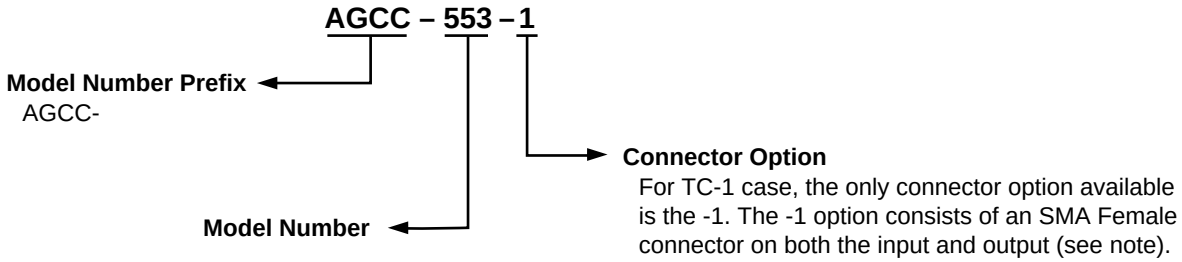
Electrical Specifications

(Measured in 50 Ω system @ +15 VDC nominal)

Symbol	Characteristic	Typical T_C = 25°C	Guaranteed Specifications T_C = 0 to 50°C	Unit
BW	Frequency Range	5-300	5-300	MHz
GP	Small Signal Gain (Min.) @ V_C = 0 VDC	22	20	dB
—	Gain Flatness (Max.) @ V_C = 0 VDC	±0.7	±1.0	dB
—	AGC Range (Min.)	36	30	dB
NF	Noise Figure (Max.) @ V_C = 0 VDC	4.0	5.0	dB
P_{1dB}	Power Output @ +1 dB Compression— V_C = 0 VDC (Min.)	+1.0	0	dBm
—	Input VSWR (Max.) @ V_C = 0 to 5 VDC	1.7:1	2.0:1	—
—	Output VSWR (Max.) @ V_C = 0 to 5 VDC	1.5:1	2.0:1	—
—	Response Time (10 to 90%) 0 to 5 V (90 to 10%) 5 to 0 V	1.5 3.5	2.0 5.0	µs µs
VDC	Bias Voltage	+15		Volts
I_D	Bias Current	25	30	mA
V_{AGC}	AGC Voltage	0-5		Volts
I_{AGC}	AGC Current	0-60		mA

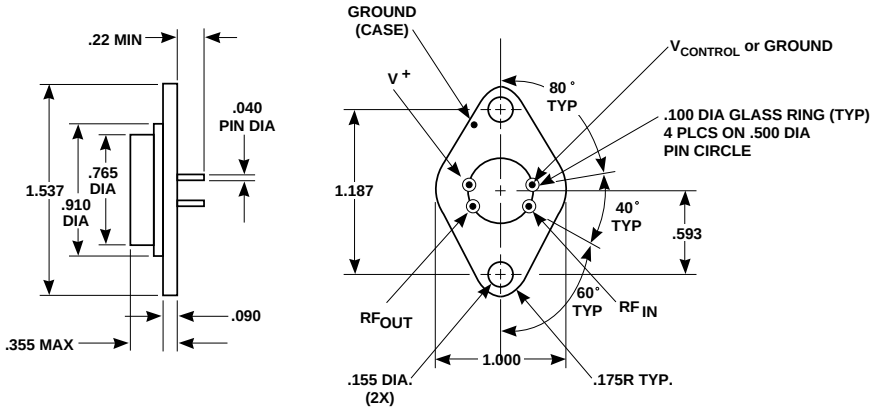
Product Options





Note: No R-Series screening is available in the TC-1 case as the case is non-hermetic.

Case Drawings
TO-3



APPROXIMATE WEIGHT 14.5 GRAMS

NOTES (UNLESS OTHERWISE SPECIFIED):
1. DIMENSIONS ARE SPECIFIED IN INCHES
2. TOLERANCES: xx ± .02
xxx ± .010

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Check for updates:
www.teledynemicrowave.com