

## 12 – 15.5 GHz 1W Amplifier

### FEATURES

- P<sub>1</sub>dB: 31 dBm
- Noise Figure: 4 dB
- IP3: 40 dBm
- Bias Condition: 1800 mA @ 12 V
- Small Signal Gain: 45 dB



### DESCRIPTION

The TA120-155-45-31 is a 1 W power amplifier designed for high linearity application in the 12 to 15.5 GHz frequency range. This amplifier utilizes high power devices that provide excellent linearity, high gain and wide dynamic range. High efficiency operation is achieved by using hybrid MIC designs and advanced GaAs PHEMT devices. The amplifier requires only a +12V DC power supply.

### ELECTRICAL SPECIFICATIONS at 25 °C

Symbol	Description	Min.	Typ.	Max.	Unit
<b>FREQ</b>	<b>Frequency Range</b>	12		15.5	GHz
<b>SSG</b>	<b>Small Signal Gain</b>	45*			dB
<b>GOF</b>	<b>Small Signal Gain Flatness</b>		± 0.5	± 0.75	dB
<b>P<sub>1</sub> dB</b>	<b>Output Power at 1 dB Gain Compression</b>	30.5	31		dBm
<b>IP3</b>	<b>Third Order Intercept Point</b>	39.5	40		dBm
<b>NF</b>	<b>Noise Figure</b>		3.5	4	dB
<b>VSWR, IN</b>	<b>Input VSWR</b>		1.5:1	1.8:1	-
<b>VSWR, OUT</b>	<b>Output VSWR</b>		1.5:1	1.8:1	-
<b>VDC</b>	<b>DC Supply Voltage</b>		12		Volt
<b>IDC</b>	<b>Current Supply</b>		1.8	2.0	A
<b>OTR</b>	<b>Operating Temperature Range</b>	-30		60	°C

\* Actual gain and current depend on configuration.

### CASE: HA1

Note: The previous product part number of TA120-155-45-31 is TC6541K.