查询AC558供应商 捷多邦，专业PCB打样工厂，24小时加急出货



# AC558 AC559

## 5 TO 500 MHz TO-8 CASCADABLE AMPLIFIERS

| *Typical Values* | *AC558* | *AC559* |
|---|---|---|
| *High Dynamic Range* | *+114 dBm* | *+117 dBm* |
| *High Power Output* | *+19.0 dBm* | *+22.0 dBm* |
| *High Third Order I.P.* | *+32.0 dBm* | *+35.0 dBm* |

*High Performance Thin Film*
*Available in Surface Mount*

## SPECIFICATIONS*

| Parameter | | Typical | Guaranteed 0 to 50° C | Guaranteed -55 to +85° C |
|---|---|---|---|---|
| **Frequency (Min.)** | | **5-600 MHz** | **5-500 MHz** | **5-500 MHz** |
| **Small Signal Gain (Min.)** | | 11.0 dB | 10.5 dB | 10.0 dB |
| **Gain Flatness (Max.)** | | ±0.2 dB | ±0.5 dB | ±0.7 dB |
| **Noise Figure (Max.)** | AC558 | <5.2 dB | 6.0 dB | 6.5 dB |
| | AC559 | <5.7 dB | 6.5 dB | 7.0 dB |
| **SWR (Max.)** | Input/Output | <1.6:1 | 1.8:1 | 1.9:1 |
| **Power Output (Min.)** @ 1 dB comp. | AC558 | +19.0 dBm | +18.0 dBm | +17.5 dBm |
| | AC559 | +22.0^ dBm | +21.0^ dBm | +20.5^ dBm |
| **DC Current (Max.)** | AC558 | 65.0 mA | 68.0 mA | 71.0 mA |
| | AC559 | 88.0 mA | 92.0 mA | 96.0 mA |

* Measured in a 50-ohm system at +15 Vdc unless otherwise specified.
^ 0.5 dBm less below 200 MHz.

## INTERMODULATION PERFORMANCE

| *Typical @ 25° C; 200 MHz* | *AC558* | *AC559* |
|---|---|---|
| **Second Order Harmonic Intercept Point** | +56 dBm | +55 dBm |
| **Second Order Two Tone Intercept Point** | +50 dBm | +49 dBm |
| **Third Order Two Tone Intercept Point** | +32 dBm | +35 dBm |

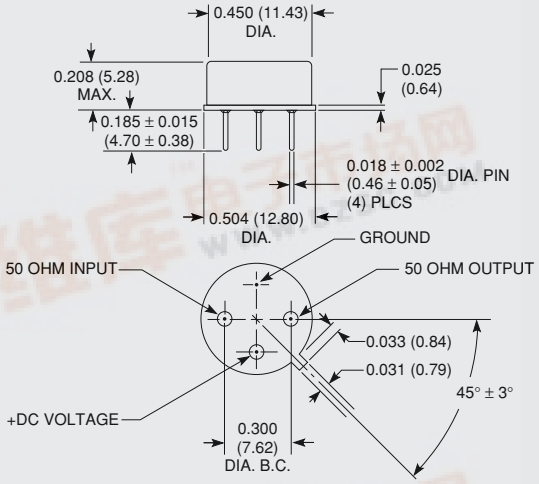
## ABSOLUTE MAXIMUM RATINGS

| | |
|---|---|
| **Storage Temperature** | -62 to 125° C |
| **Maximum Case Temperature** | +125° C |
| **Maximum DC Voltage** | +19 Volts |
| **Maximum Continuous RF Input Power** | +13 dBm |
| **Maximum Short Term Input Power** (1 Minute Max.) | 100 Milliwatts |
| **Maximum Peak Power** (3 µsec Max.) | 0.5 Watt |
| **Burn-in Temperature** (AC558/AC559) | +105° C/+85° C |
| **Thermal Resistance**[1] (θjc; AC558) | +37° C/Watt |
| **Thermal Resistance**[1] (θjc; AC559) | +37° C/Watt |
| **Junction Temperature Rise Above Case** (Tjc; AC558) | +37.4° C |
| **Junction Temperature Rise Above Case** (Tjc; AC559) | +50.3° C |

[1] Thermal resistance is based on total power dissipation.

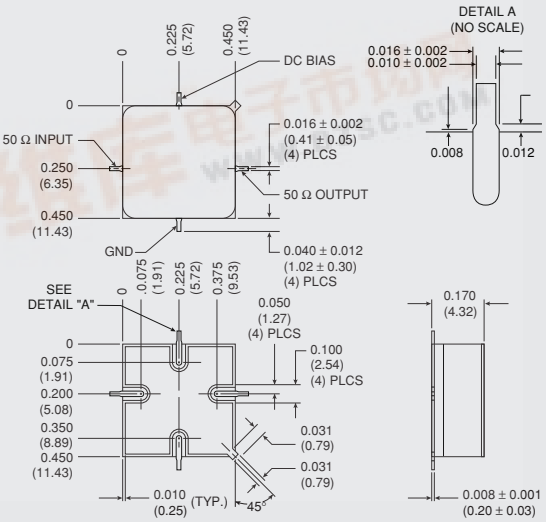
## AC558/AC559

*TO-8 Package for Amplifiers*




## AS558/AS559

*SMTO-8 Package for Amplifiers*



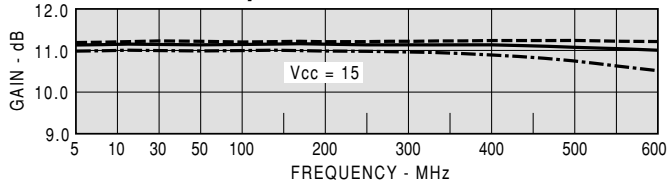

DIMENSIONS ARE IN INCHES (MILLIMETERS)

www.dzsc.com 维库电子市场网

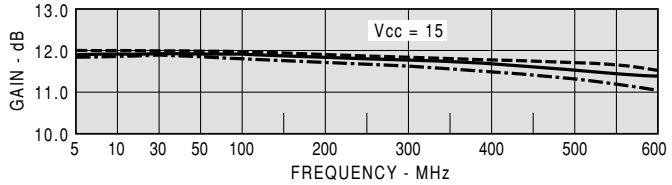
## TYPICAL PERFORMANCE

KEY: +25 °C ——
+85 °C —·—
-55 °C - - -

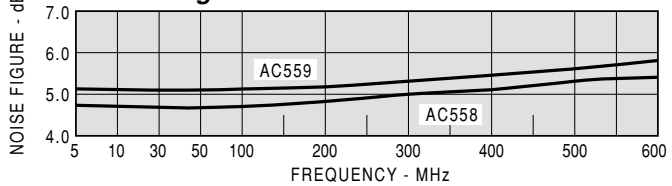
### Gain vs Temperature AC558



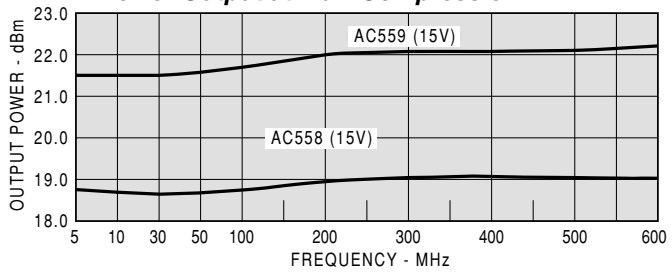

### Gain vs Temperature AC559



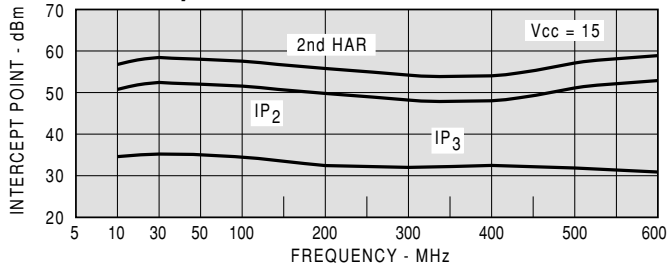

### Noise Figure Vcc = 15



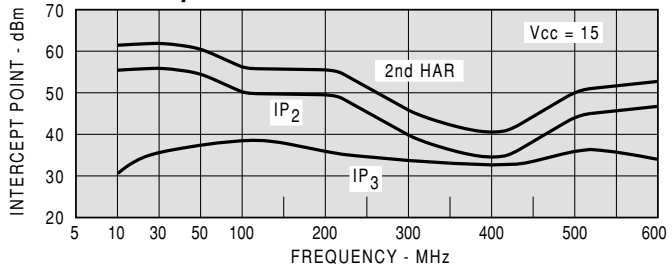

### Power Output at 1 dB Compression




### Intercept Point AC558




### Intercept Point AC559




## TYPICAL AUTOMATIC TEST DATA

Model: AC559 Vcc=+15V Icc=87.34

| FREQ MHZ | SWR IN | SWR OUT | GAIN DB | PHASE DEG | DELAY NSEC | REV/ISO DB |
|---|---|---|---|---|---|---|
| 5 | 1.42 | 1.43 | 11.85 | -174 | | -17.1 |
| 10 | 1.40 | 1.41 | 11.85 | -179 | | -17.0 |
| 30 | 1.40 | 1.39 | 11.89 | 174 | 0.79 | -17.0 |
| 50 | 1.40 | 1.38 | 11.89 | 168 | 0.75 | -17.0 |
| 100 | 1.39 | 1.37 | 11.88 | 155 | 0.74 | -17.0 |
| 200 | 1.39 | 1.32 | 11.80 | 129 | 0.72 | -16.8 |
| 300 | 1.41 | 1.27 | 11.71 | 103 | 0.72 | -16.6 |
| 400 | 1.43 | 1.24 | 11.62 | 77 | 0.74 | -16.3 |
| 500 | 1.41 | 1.29 | 11.50 | 49 | 0.77 | -15.8 |
| 600 | 1.31 | 1.47 | 11.32 | 20 | 0.82 | -15.2 |

LINEAR S-PARAMETERS

Model: AC559 Vcc=+15V Icc=87.34

| FREQ. | S11 | | S21 | | S12 | | S22 | |
|---|---|---|---|---|---|---|---|---|
| MHz | MAG | ANG | MAG | ANG | MAG | ANG | MAG | ANG |
| 5 | 0.17 | -155.3 | 3.91 | -174.1 | 0.140 | 7.7 | 0.18 | 174.1 |
| 10 | 0.17 | -166.5 | 3.91 | -178.9 | 0.141 | 3.4 | 0.17 | 174.9 |
| 30 | 0.17 | -174.7 | 3.93 | 173.7 | 0.141 | -1.0 | 0.16 | 172.9 |
| 50 | 0.17 | -176.8 | 3.93 | 168.0 | 0.142 | -3.6 | 0.16 | 171.1 |
| 100 | 0.16 | -177.8 | 3.93 | 154.6 | 0.142 | -8.8 | 0.15 | 165.1 |
| 200 | 0.16 | -177.1 | 3.89 | 128.9 | 0.144 | -18.2 | 0.14 | 154.0 |
| 300 | 0.17 | -176.4 | 3.85 | 102.9 | 0.148 | -28.1 | 0.12 | 147.9 |
| 400 | 0.18 | 177.0 | 3.81 | 76.6 | 0.154 | -38.6 | 0.11 | 152.6 |
| 500 | 0.17 | 160.2 | 3.76 | 49.2 | 0.163 | -50.4 | 0.13 | 161.3 |
| 600 | 0.13 | 127.0 | 3.68 | 20.4 | 0.174 | -64.5 | 0.19 | 157.4 |
| 700 | 0.14 | 47.7 | 3.53 | -11.0 | 0.187 | -81.7 | 0.28 | 137.6 |

Model: AC559 Vcc=+12V Icc=68.81

| FREQ MHZ | SWR IN | SWR OUT | GAIN DB | PHASE DEG | DELAY NSEC | REV/ISO DB |
|---|---|---|---|---|---|---|
| 5 | 1.42 | 1.41 | 11.81 | -175 | | -17.1 |
| 10 | 1.40 | 1.39 | 11.81 | -179 | | -17.1 |
| 30 | 1.40 | 1.38 | 11.86 | 173 | 0.83 | -17.0 |
| 50 | 1.40 | 1.37 | 11.85 | 168 | 0.83 | -17.0 |
| 100 | 1.40 | 1.36 | 11.82 | 154 | 0.76 | -17.0 |
| 200 | 1.42 | 1.31 | 11.73 | 128 | 0.73 | -16.8 |
| 300 | 1.46 | 1.27 | 11.60 | 101 | 0.74 | -16.6 |
| 400 | 1.48 | 1.26 | 11.47 | 75 | 0.75 | -16.2 |
| 500 | 1.46 | 1.33 | 11.30 | 47 | 0.78 | -15.7 |
| 600 | 1.37 | 1.52 | 11.08 | 18 | 0.83 | -15.0 |

Model: AC558 Vcc=+15V Icc=65.09

| FREQ MHZ | SWR IN | SWR OUT | GAIN DB | PHASE DEG | DELAY NSEC | REV/ISO DB |
|---|---|---|---|---|---|---|
| 5 | 1.55 | 1.54 | 11.09 | -175 | | -16.6 |
| 10 | 1.53 | 1.53 | 11.09 | -179 | | -16.6 |
| 30 | 1.53 | 1.51 | 11.12 | 175 | 0.79 | -16.5 |
| 50 | 1.53 | 1.50 | 11.11 | 170 | 0.60 | -16.5 |
| 100 | 1.52 | 1.49 | 11.15 | 160 | 0.57 | -16.5 |
| 200 | 1.50 | 1.44 | 11.14 | 139 | 0.59 | -16.6 |
| 300 | 1.51 | 1.36 | 11.18 | 117 | 0.59 | -16.6 |
| 400 | 1.54 | 1.28 | 11.21 | 96 | 0.61 | -16.5 |
| 500 | 1.61 | 1.19 | 11.20 | 73 | 0.62 | -16.5 |
| 600 | 1.68 | 1.18 | 11.11 | 50 | 0.66 | -16.3 |