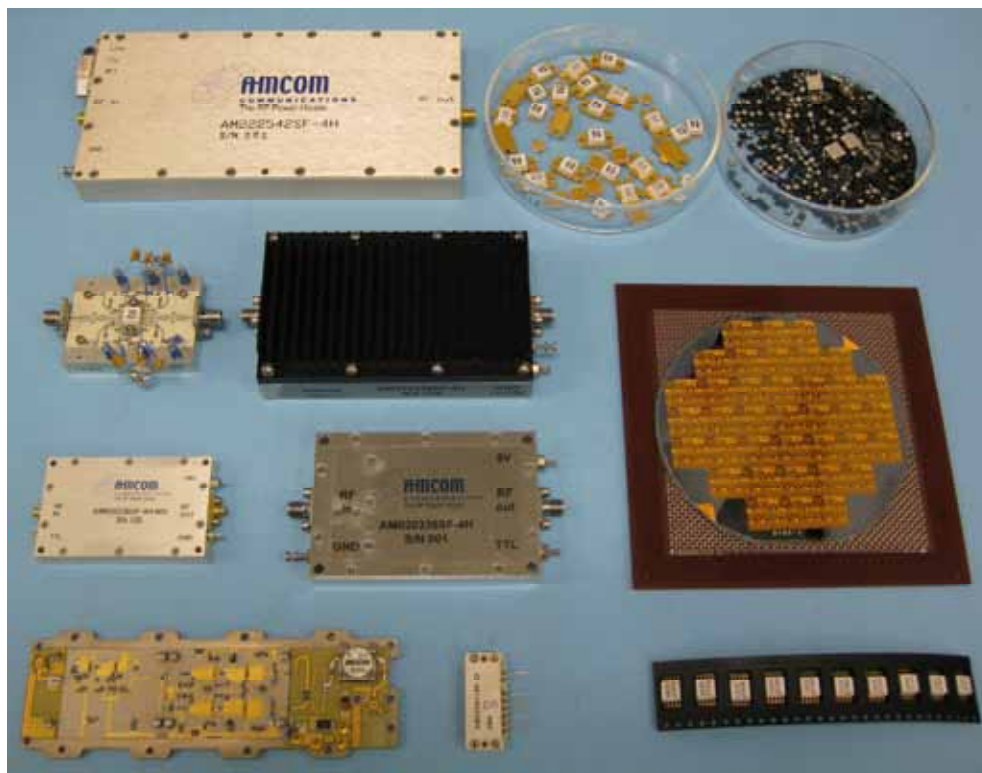


AMCOM Communications, Inc. Product Brochure 2010



**ISO 9001:2008 Certified
Registration # 220501.1Q**

Section 1 - AMCOM Communications, Inc.

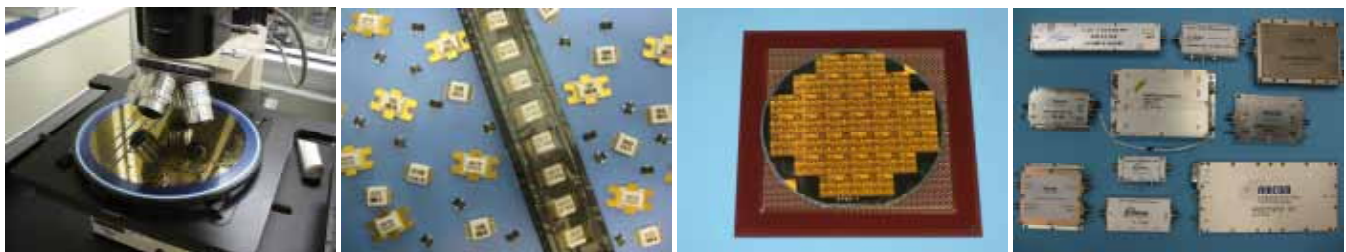
AMCOM was established in December 1996 by a group of microwave designers experienced in both microwave circuit design and microwave device fabrication technology. It is located in Gaithersburg, Maryland, USA, about 20 miles northwest of Washington, DC. The company has earned a reputation as a leading edge microwave design organization that includes power FETs, MMIC power amplifiers, as well as high-power amplifier modules with RF and DC connectors that are ready to be used in microwave systems. One of our specialty products is high-power, broadband, high-efficiency power amplifiers.



AMCOM has all the expertise, man power, space, and equipment for manufacturing state-of-the-art products. Some of our capabilities are: active device design, MMIC design, and power amplifier module design. In addition, we are experts in device/MMIC packaging, module assembly and RF/DC testing. For active devices we either procure parts such as silicon LDMOS, or GaN HEMT, or we use a semiconductor foundry to fabricate our own proprietary device/MMIC.

One of AMCOM's specialties is custom designing MMICs and modules for our customers' specific needs. The custom products include all front-end components such as low-noise amplifiers, power amplifiers, switches, attenuators, phase shifters, and up/down converters. We make every effort to meet our customers' performance requirements including size and weight. See the customer inquiry sheets in the back of this brochure.

AMCOM has a dedicated customer support team and takes pride in its tradition of identifying cost-effective solutions for its customers. Please contact us with your microwave component needs. The following sections include AMCOM's product selection guide and package outlines.



Section 2 - Product Selection Guide

(Please refer to www.amcomusa.com for data sheets)

Discrete FET Summary

| Model | Frequency | Gain* | P _{1dB} | IP3 | η | V _{ds} | I _{ds} | Package |
|---------------|-------------|--------|------------------|---------|-----|-----------------|-----------------|---------|
| AM006MX-QG-R | DC - 3.5GHz | 13dB | 22dBm | 34dBm | 42% | 5V | 60mA | Fig. 1 |
| AM012MX-QG-R | DC - 3.5GHz | 13.5dB | 25dBm | 37dBm | 42% | 5V | 120mA | Fig. 1 |
| AM024MX-QG-R | DC - 3.5GHz | 13dB | 28dBm | 39dBm | 42% | 5V | 240mA | Fig. 1 |
| AM036MX-QG-R | DC - 3.5GHz | 12dB | 29.5dBm | 42dBm | 42% | 5V | 360mA | Fig. 1 |
| AM048MX-QG-R | DC - 3.5GHz | 11dB | 31dBm | 43dBm | 42% | 5V | 480mA | Fig. 1 |
| AM006MX-QF-R | DC - 3.5GHz | 13dB | 23.5dBm | 35dBm | 42% | 7V | 60mA | Fig. 2 |
| AM012MX-QF-R | DC - 3.5GHz | 13dB | 26.5dBm | 37dBm | 42% | 7V | 120mA | Fig. 2 |
| AM024MX-QF-R | DC - 3.5GHz | 13dB | 29.5dBm | 40dBm | 42% | 7V | 240mA | Fig. 2 |
| AM036MX-QF-R | DC - 3.5GHz | 12dB | 31dBm | 42dBm | 42% | 7V | 360mA | Fig. 2 |
| AM048MX-QF-R | DC - 3.5GHz | 11dB | 32.5dBm | 44dBm | 42% | 7V | 480mA | Fig. 2 |
| AM072MX-QF-R | DC - 3.5GHz | 11dB | 34dBm | 44dBm | 42% | 7V | 720mA | Fig. 2 |
| AM072MX-CU-R | DC - 3.5GHz | 11dB | 34dBm | 44dBm | 42% | 7V | 720mA | Fig. 3 |
| AM100MX-CU-R | DC - 4.0GHz | 10dB | 35dBm | 48dBm | 37% | 7V | 1000mA | Fig. 3 |
| AM150MX-CU-R | DC - 3.5GHz | 10dB | 36.5dBm | 50dbm | 37% | 7V | 1500mA | Fig. 3 |
| AM200MX-CU-R | DC - 3.5GHz | 10dB | 38dBm | 48Bm | 35% | 7V | 2000mA | Fig. 3 |
| AM300MX-CU-R | DC - 2.9GHz | 9dB | 39.5dBm | 52dBm | 30% | 7V | 3000mA | Fig. 3 |
| AM005MH2-BI-R | DC - 3.5GHz | 15dB | 25dBm | 40dBm | 40% | 14V | 50mA | Fig. 4 |
| AM010MH2-BI-R | DC - 3.5GHz | 15dB | 28dBm | 43dBm | 40% | 14V | 100mA | Fig. 4 |
| AM020MH2-BI-R | DC - 3.5GHz | 15dB | 31dBm | 46dBm | 40% | 14V | 200mA | Fig. 4 |
| AM010MH4-BI-R | DC - 2.0GHz | 19dB | 31dBm | 46dBm | 35% | 28V | 100mA | Fig. 4 |
| AM030MH4-BI-R | DC - 2.0GHz | 19dB | 36dBm | 49dBm | 35% | 28V | 300mA | Fig. 4 |
| AM032MH4-BI-R | DC - 2.0GHz | 19dB | 36dBm | 49dBm | 35% | 28V | 320mA | Fig. 4 |
| AM120MH2-BI-R | DC - 3.5GHz | 15dB | 39dBm | 50dBm | 30% | 14V | 1200mA | Fig. 4 |
| AM005WX-BH-R | DC - 12GHz | 16dB | 25dBm | 37dBm | 55% | 8V | 150mA | Fig. 5 |
| AM010WX-BH-R | DC - 12GHz | 14dB | 29.8dBm | 38.5dBm | 50% | 8V | 300mA | Fig. 5 |
| AM060WX-BI-R | DC-10GHz | 12dB | 35.5 | 47dBm | 50% | 8V | 600mA | Fig. 4 |
| AM048MX-89-R | DC - 3.5GHz | 9dB | 31dBm | 43dBm | 42% | 5V | 480mA | Fig. 6 |

[Note 1]: * All RF data are measured at 2GHz or 3.5GHz

[Note 2]: All devices are RoHs compliant

[Note 3]: Gain is small signal gain, P_{1dB} is output power at 1dB compression, IP3 is 3rd order intercept point, η is efficiency, V_{ds} is drain-to-source voltage, Package – see section 3

[Note 4]: See application notes at www.amcomusa.com for SMT assembly instructions

MMIC Summary

| Model | Frequency | Gain | P _{1dB} | IP3 | η | V _{dd} | V _{gg} |
|-----------------|--------------|------|------------------|--------|-----|-----------------|-----------------|
| AM002535MM-XX-R | 0.03-2.5GHz | 24dB | 34dBm | 45dBm | 25% | 20V | -0.90 |
| AM003536WM-XX-R | 0.01-3.5GHz | 23dB | 35dBm | 48dBm | 20% | 20V | -1.00 |
| AM011037WM-XX-R | 0.1-1.0GHz | 30dB | 37dBm | 50dBm | 50% | 8V | -0.70 |
| AM012020WM-XX-R | 0.1-2.0GHz | 30dB | 16dBm | NF=2dB | -- | 8V | -1.20 |
| AM012535MM-XX-R | 0.03-2.5GHz | 23dB | 33dBm | 45dBm | 20% | 20V | -2.80 |
| AM103026MM-XX-R | 0.9-3.2GHz | 22dB | 25dBm | 43dBm | 10% | 14V | -2.00 |
| AM132740MM-XX-R | 1.3-2.7GHz | 26dB | 38dBm | 51dBm | 30% | 14V | -0.60 |
| AM142540MM-XX-R | 1.4-1.8GHz | 25dB | 39dBm | 50dBm | 35% | 14V | -0.86 |
| AM143440WM-XX-R | 1.4-3.4GHz | 20dB | 38dBm | 44dBm | 44% | 12V | -0.90 |
| AM153040WM-XX-R | 1.4-3.4GHz | 18dB | 37dBm | 43dBm | 30% | 12V | -0.90 |
| AM183031WM-XX-R | 1.6-3.3GHz | 31dB | 31dBm | 40dBm | 25% | 8V | -1.00 |
| AM204437WM-XX-R | 2.0-4.4GHz | 30dB | 37dBm | N/A | 25% | 8V | -0.76 |
| AM244236WM-XX-R | 2.4-4.2GHz | 31dB | 36dBm | N/A | 30% | 8V | -0.76 |
| AM254038WM-XX-R | 2.5-4.0GHz | 18dB | 38dBm | 45dBm | 35% | 12V | -0.90 |
| AM254540WM-XX-R | 2.5-4.5GHz | 18dB | 40dBm | 53dBm | 40% | 12V | -1.00 |
| AM264239WM-XX-R | 2.6-4.2GHz | 20dB | 39dBm | 49dBm | 35% | 14V | -0.95 |
| AM284233MM-XX-R | 2.8-4.2GHz | 34dB | 33dBm | 40dBm | 25% | 8V | -0.70 |
| AM304031WM-XX-R | 2.6-4.6GHz | 31dB | 32dBm | 39dBm | 25% | 8V | -0.70 |
| AM324036WM-XX-R | 3.0-4.2GHz | 29dB | 36dBm | 45dBm | 25% | 8V | -0.70 |
| AM13714530WM-SM | 13.7-14.5GHz | 30dB | 30dBm | 40dBm | 15% | 8V | -0.80 |

[Note 1]: XX is BM or FM. See Fig. 7 and Fig. 8 in Section 3.

[Note 2]: All MMICs are RoHs compliant.

[Note 3]: Gain is small signal gain, P_{1dB} is output power at 1dB compression, IP3 is 3rd order intercept point, η is efficiency, V_{dd} is positive voltage, V_{gg} is negative voltage, Package – see section 3

[Note 4]: See application notes at www.amcomusa.com for SMT assembly instructions



Module Summary

| Model | Frequency | Gain | P _{1dB} | IP3 | η | V _{dd} | V _{gg} | Wt | Size (in) |
|-----------------------------|----------------|--------------------------------|------------------|-------|------|-----------------|-----------------|------|-----------------|
| AM000551SF-2H | 0.03-0.5GHz | 26dB | 125W | -- | 30% | 28V | None | 44oz | 8.84x1.54x0.914 |
| AM003040SF-2H | 0.01-3.0GHz | 22dB | 10W | 50dBm | 22% | 24V | None | 16oz | 6.40x4.04x0.66 |
| AM003536SF-2H | 0.01-3.5GHz | 22dB | 4W | 49dBm | 20% | 24V | None | 3oz | 2.84x2.04x0.56 |
| AM020331SF-2D | 0.10-0.35GHz | 25dB | 2W | N/A | 30% | 7V | -5 | 1oz | 1.34x0.47x0.17 |
| AM020336SF-4H | 0.175-0.325GHz | 60dB | 5W | 46dBm | 45% | 8V | None | 4oz | 3.15x2.15x0.49 |
| AM020340SF-3H | 0.17-0.32GHz | 35dB | 14W | N/A | 25% | 28V | None | 6oz | 8.13x3.60x1.25 |
| AM020440SF-3H | 0.225-0.41GHz | 31dB | 39W | N/A | 25% | 28V | None | 10oz | 4.75x3.00x0.80 |
| AM020440SF-3H-W | 0.225-0.41GHz | 26dB | 38W | N/A | 15% | 28V | None | 4oz | 3.38x1.75x0.84 |
| AM042644SF-3H | 0.3-2.6GHz | 35dB | 20W | 50dBm | 33% | 28V | None | -- | 4.72x2.56x0.98 |
| AM053231SF-3H | 0.5-3.5GHz | 20dB | 1.6W | N/A | 10% | 15V | -5 | 12oz | 4.00x3.00x0.75 |
| AM080947SF-2H | 0.86-0.9GHz | 25dB | 50W | 57dBm | 30% | 10V | -5 | -- | 14.10x7.85x1.45 |
| AM090945SF-3H | 0.88-0.96GHz | >8dB | 40W* | N/A | 30% | 13.5V | None | 23oz | 5.94x2.48x2.24 |
| AM091047SF-2H | 0.935-0.96GHz | 24dB | 40W | 57dBm | 30% | 10V | -5 | -- | 14.10x7.85x1.45 |
| AM091247SF-2H | 0.9-1.3GHz | 20dB | 30W | N/A | 25% | 31V, 7V | -5 | -- | 8.63x3.00x1.120 |
| AM091251SF-1H | 0.9-1.3GHz | 10dB | 100W* | N/A | 30% | 31V | None | -- | 8.80x3.50x0.91 |
| AM091253SF-2H | 0.95-1.25GHz | 20dB | 200W* | N/A | 25% | 31V | None | -- | 14.76x6.00x1.12 |
| AM091257SF-6H | 0.95-1.25GHz | 70dB | 500W* | N/A | N/A | 208V AC | None | -- | See datasheet |
| AM094233SF-3H | 0.9-4.2GHz | 19dB | 1.6W | N/A | 10% | 15V | -5 | 12oz | 4.00x3.00x0.75 |
| AM141940SF-2H | 1.4-1.8GHz | 25dB | 5.5W | 50dBm | 20% | 16V | None | 3oz | 2.80x2.00x0.56 |
| AM183031SF-3H | 1.8-3.4GHz | 31dB | 1.25W | 38dBm | 12% | 12V | None | 3oz | 2.80x2.00x0.56 |
| AM203043SF-4H | 2.0-3.0GHz | 37dB | 15W | 50dBm | >15% | 15V | None | 6oz | 7.50x3.20x0.55 |
| AM204437SF-3H | 2.0-4.4GHz | 30dB | 4W | 44dBm | 15% | 12V | None | 3oz | 2.80x2.00x0.56 |
| AM232537SF-2H T/R Module | 2.1-2.6GHz | TX:22dB RX:16dB NF:1.5dB | 5W | N/A | 20% | 14V | None | 4oz | 2.80x3.00x0.56 |

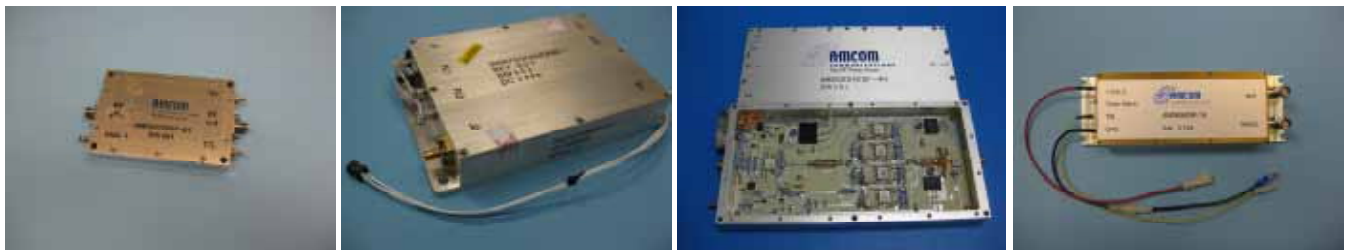


Module Summary (cont.)

| Model | Frequency | Gain | P _{1dB} | IP3 | η | V _{dd} | V _{gg} | Wt | Size (in) |
|--------------------------------|------------|--|------------------|-------|-----|-----------------|-----------------|-------|----------------|
| AM243638SF-3H | 2.4-3.6GHz | 37dB | 6W | 45dBm | 20% | 12-15V | -- | 10oz | 4.00x2.50x0.56 |
| AM273545SF-6H | 2.5-4.0GHz | 50dB | 30W | 53dBm | 20% | 12V | None | 40 oz | 8.00x4.75x1.00 |
| AM304031SF-3H | 3.0-4.2GHz | 16dB | 2W | 43dBm | 24% | 7V | -2 | 3 oz | 2.10x1.11x0.59 |
| AM324036SF-3H | 3.0-4.2GHz | 29dB | 4W | 43dBm | 19% | 12V | None | 3 oz | 2.80x2.00x0.56 |
| AM343635SF-2H | 3.4-3.6GHz | 18dB | 4W | 45dBm | 27% | 7V | -2 | 3 oz | 2.80x1.50x0.61 |
| Cellular Signal Booster | | PCS/AMPS. See Data sheet at www.amcomusa.com | | | | | | | |

[Note 1]: * Denotes saturated output power

[Note 2]: Gain is small signal gain, P_{1dB} is output power at 1dB compression, IP3 is 3rd order intercept point, η is efficiency, V_{dd} is positive voltage, V_{gg} is negative voltage, Wt is weight, Package – see section 3



Section 3 - Package Outlines

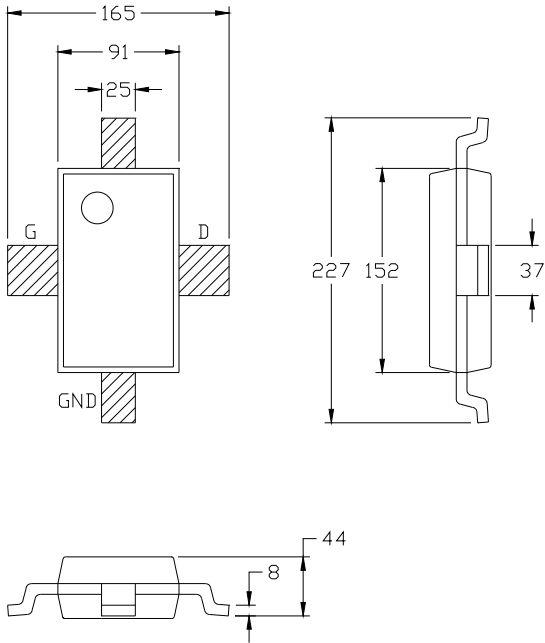


Fig. 1 – QG Package

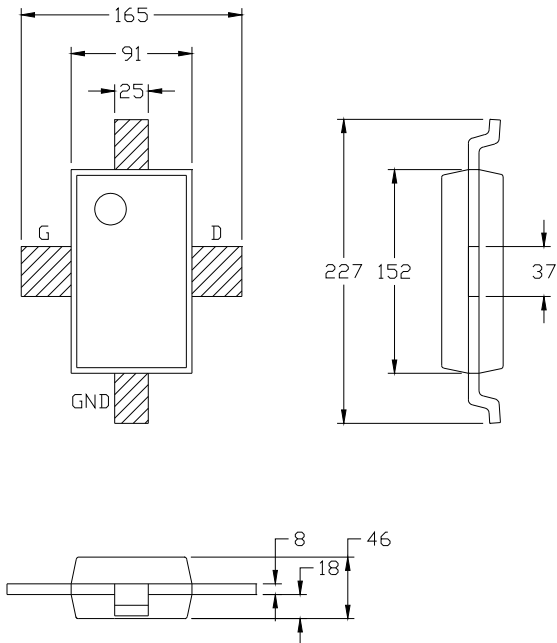


Fig. 2 – QF Package

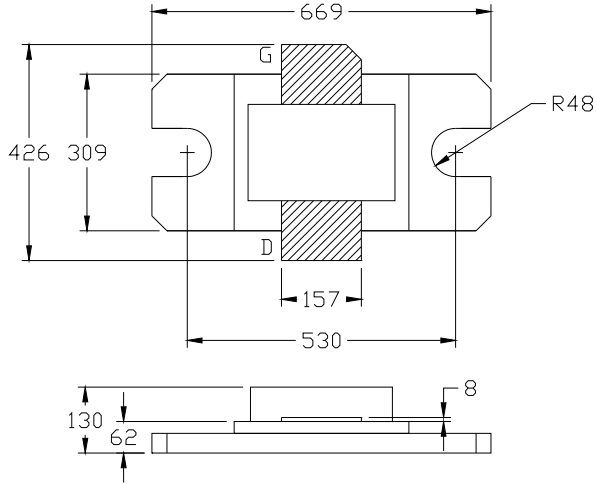


Fig. 3 – CU Package

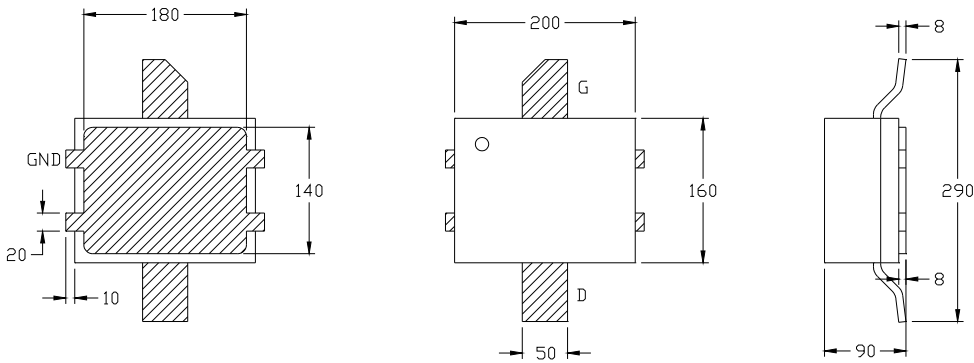


Fig. 4 – BI Package

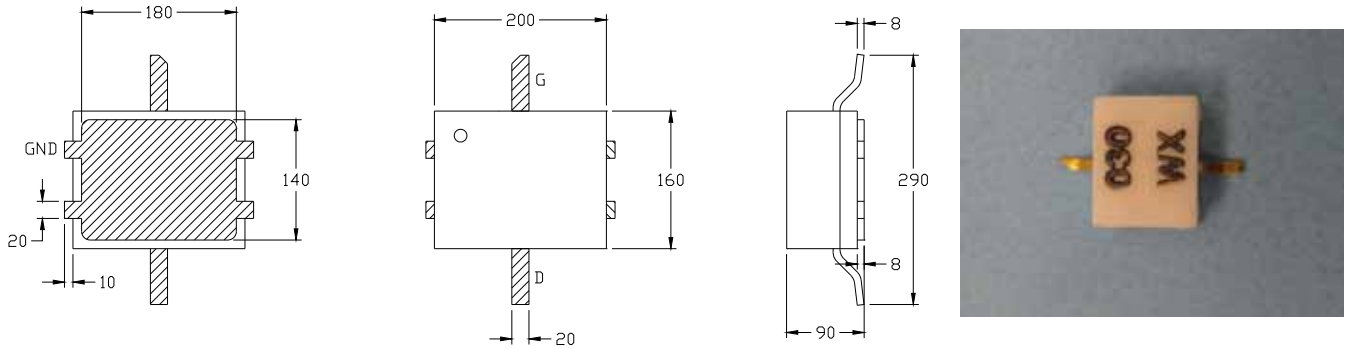


Fig. 5 – BH Package

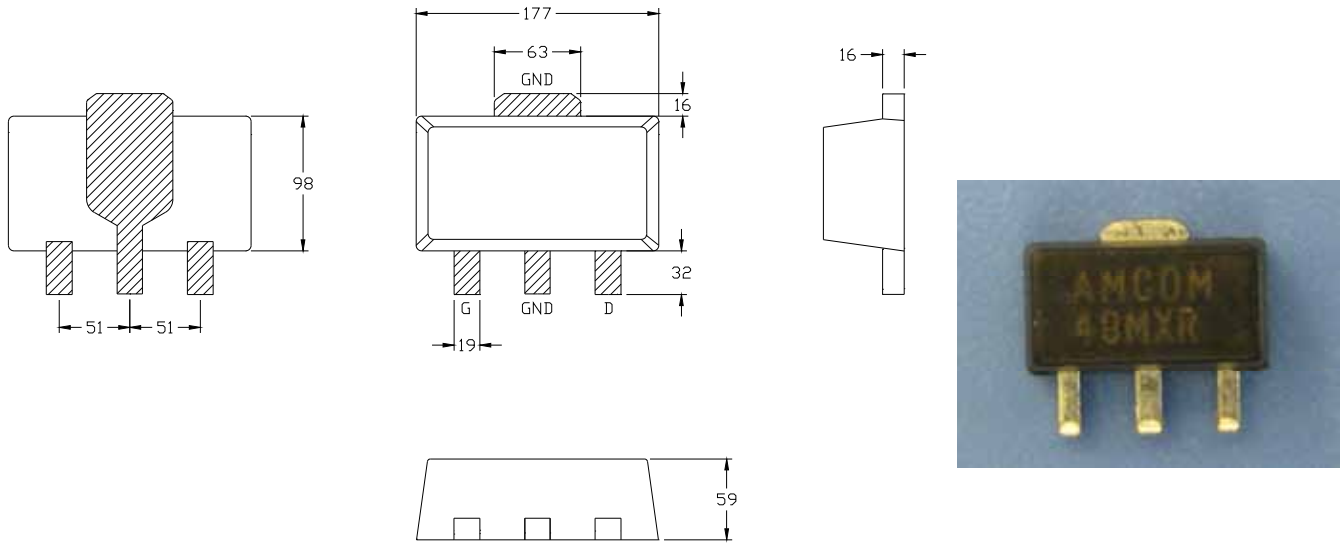


Fig. 6 – SOT-89 Package

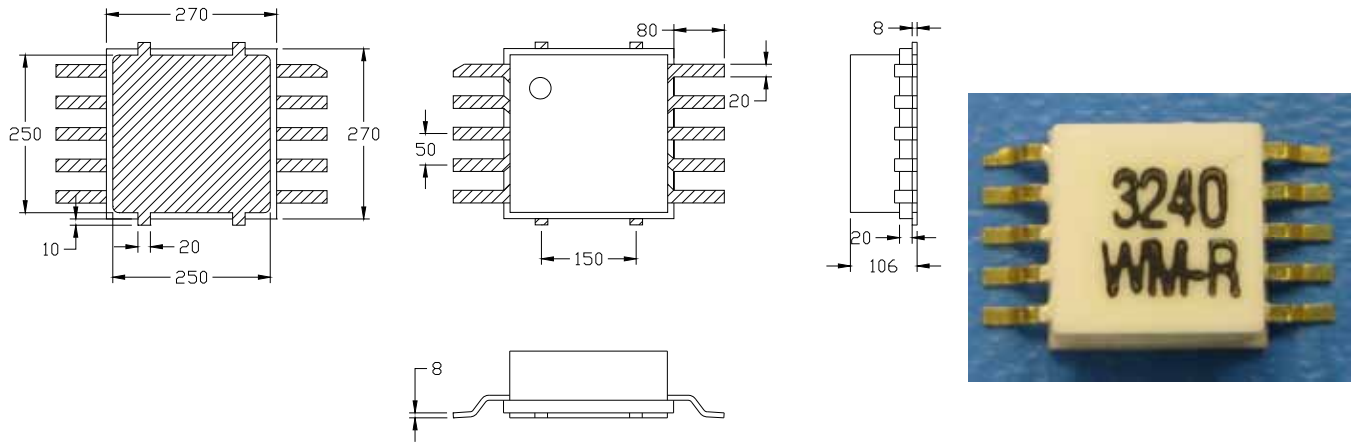


Fig. 7 – BM Package

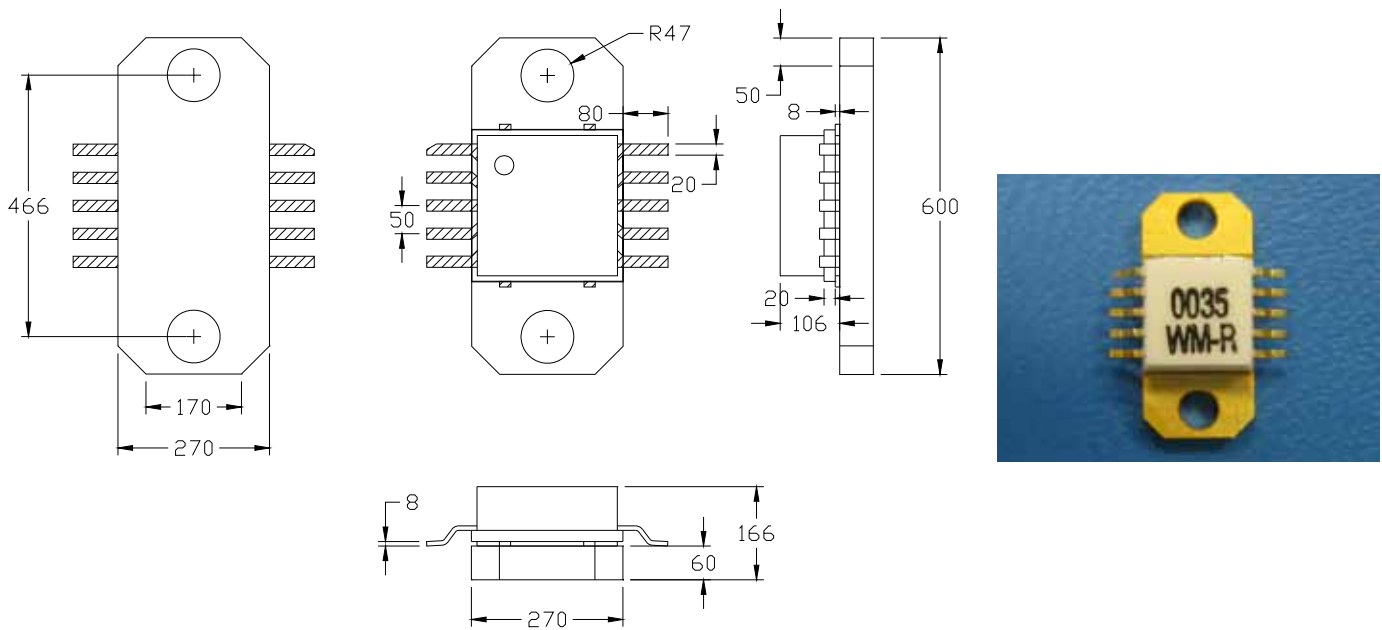


Fig. 8 – FM Package

Custom Inquiry

| | |
|----------------|--------------|
| Contact: _____ | Date: _____ |
| Company: _____ | Phone: _____ |
| Address: _____ | Fax: _____ |
| _____ | Email: _____ |

Please answer questions and fill out parameters below for component requirements:

1- What is the intended system application?

2- What is the projected quantity & date needed?

3- Application Type:

- | | | | |
|-------------------|---------------------------------|----------------------------------|-------------------------------------|
| A) Amplifier | <input type="checkbox"/> PA | <input type="checkbox"/> LNA | <input type="checkbox"/> TX/RX |
| B) Switch: | <input type="checkbox"/> SPST | <input type="checkbox"/> SP2T | <input type="checkbox"/> MPNT _____ |
| C) Attenuator: | <input type="checkbox"/> Analog | <input type="checkbox"/> Digital | No. of bits _____ |
| D) Phase Shifter: | <input type="checkbox"/> Analog | <input type="checkbox"/> Digital | No. of bits _____ |

4- Component Type:

- | | | | |
|-----------|--|--|--|
| A) MMIC | <input type="checkbox"/> Plastic Package | <input type="checkbox"/> Ceramic Package | |
| B) Module | <input type="checkbox"/> Drop-In | <input type="checkbox"/> RF Connector (specify): _____ | |

Detailed Specifications

| Parameter | Specifications | Unit | Other details |
|---------------------------------------|----------------|------|---------------|
| Frequency | | GHz | |
| Small Signal Gain | | dB | |
| Gain variation | ± | dB | |
| Output Power at 1dB compression | | dBm | |
| Efficiency at P _{1dB} | | % | |
| Noise Figure | ≤ | dB | |
| Maximum Insertion Loss (passive ckt) | | dB | |
| Maximum Attenuation (for attenuators) | | dB | |
| Maximum Phase (for phase shifters) | | Deg. | |
| Input / Output Return Loss | ≥ | dB | |
| Size (Length x Width x Height) | | mm | |
| Weight | ≤ | gm | |
| Bias Voltage and Current | / | V/mA | |
| Other: | | | |



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