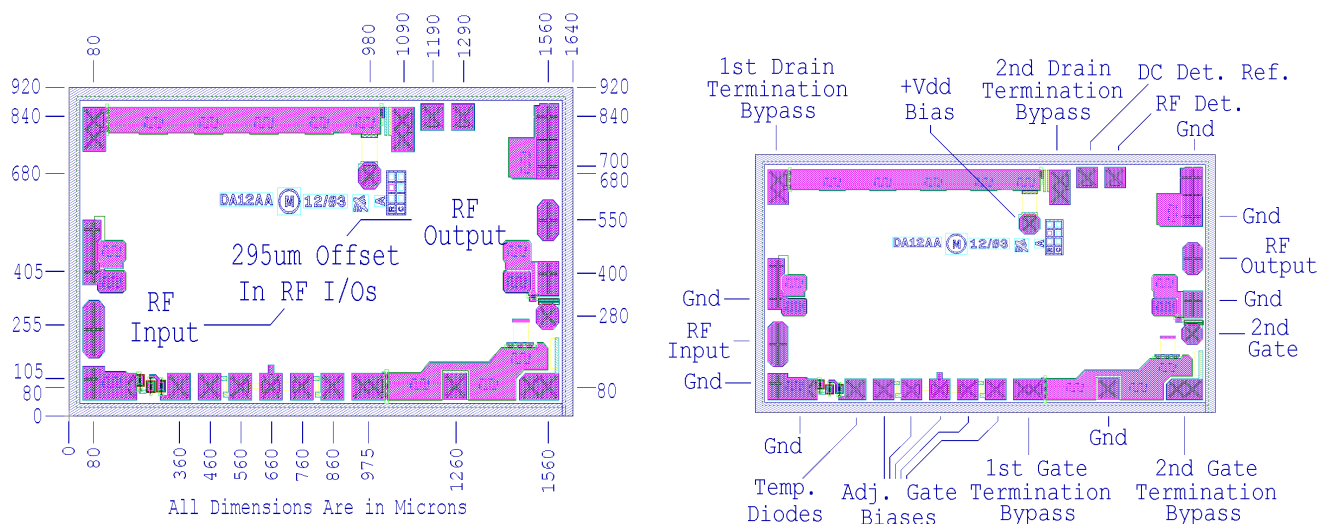
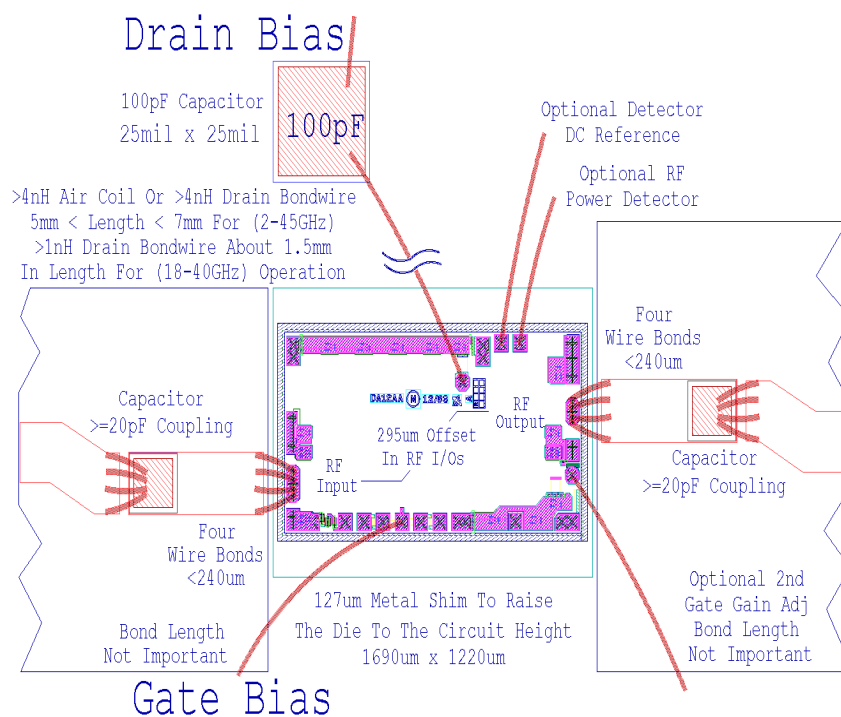


## MMA029AA Bonding Diagram

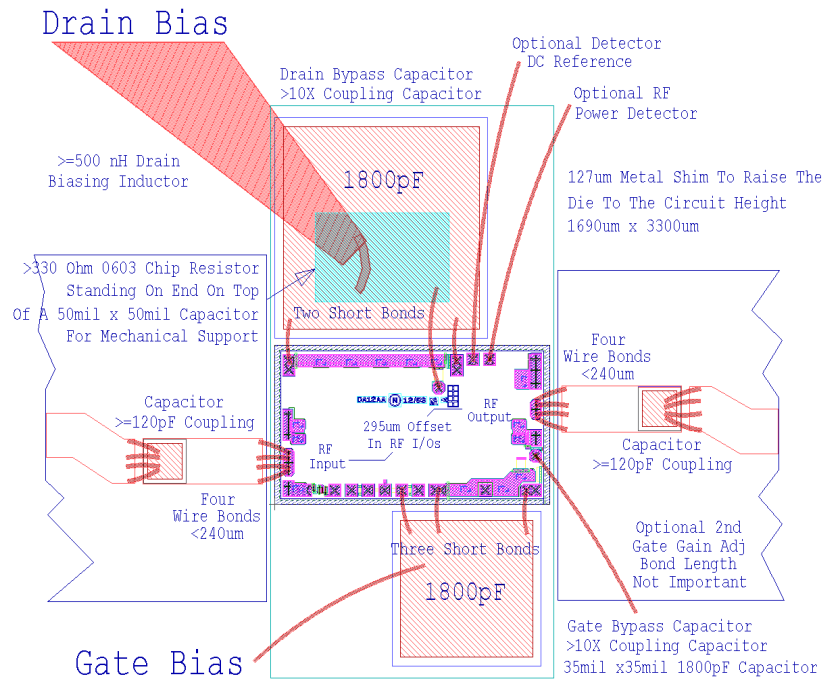


**Figure 1. Die size, pad locations, and pad descriptions**

Chip size: 1640x920 $\mu$ m (64.6x36.2mil)  
 Chip size tolerance:  $\pm 5 \mu$ m (0.2mil)  
 Chip thickness: 100  $\pm$  10  $\mu$ m (4  $\pm$  0.4mil)  
 Pad dimensions: 80x80  $\mu$ m (3.1x3.1mil)



**Figure 2. -45GHz bonding diagram**



**Figure 3. 40MHz-45GHz bonding diagram**

### Pick-up and Chip Handling

This MMIC has exposed air bridges on the top surface. **Do not pick up chip with vacuum on the die center**; handle from edges or use a collet.

### Thermal Heat Sinking

To avoid damage and for optimum performance, you must observe the maximum channel temperature and ensure adequate heat sinking.

### ESD Handling and Bonding

**This MMIC is ESD sensitive**; preventive measures should be taken during handling, die attach, and bonding.

**Epoxy die attach is recommended.** Please review our application note [MM-APP-0001](#) GaAs MMIC handling and die attach recommendations, on our website for more handling, die attach and bonding information.



**Microsemi Corporate Headquarters**  
One Enterprise, Aliso Viejo CA 92656 USA  
Within the USA: +1 (800) 713-4113  
Outside the USA: +1 (949) 380-6100  
Sales: +1 (949) 380-6136  
Fax: +1 (949) 215-4996  
E-mail: [sales.support@microsemi.com](mailto:sales.support@microsemi.com)

Microsemi Corporation (Nasdaq: MSCC) offers a comprehensive portfolio of semiconductor and system solutions for communications, defense and security, aerospace, and industrial markets. Products include high-performance and radiation-hardened analog mixed-signal integrated circuits, FPGAs, SoCs, and ASICs; power management products; timing and synchronization devices and precise time solutions, setting the world's standard for time; voice processing devices; RF solutions; discrete components; security technologies and scalable anti-tamper products; Power-over-Ethernet ICs and midspans; as well as custom design capabilities and services. Microsemi is headquartered in Aliso Viejo, Calif. and has approximately 3,400 employees globally. Learn more at [www.microsemi.com](http://www.microsemi.com).

---

© 2014 Microsemi Corporation. All rights reserved. Microsemi and the Microsemi logo are trademarks of Microsemi Corporation. All other trademarks and service marks are the property of their respective owners.