Application Brief

# Power Measurement Solutions in High-volume Manufacturing

Anritsu
envision : ensure

## Increasing throughput and reducing costs on the manufacturing line

In high volume manufacturing of semiconductors, chipsets, cell phones, etc., throughput, quality, and price are three major factors of success. It's critical that manufacturers deliver on both timing and quality so as not to impact the rest of the supply chain, and in a highly competitive industry, pennies per unit can make the difference between winning or losing a contract. Unfortunately, speed, accuracy, and cost tend to be opposing forces. How do you produce more units per run while ensuring quality – without breaking the budget?

## Today's Test Challenges:

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| **Maximizing capacity of the manufacturing line** | Nobody wants to say 'no' to an order. But if current capacity cannot meet required deadlines, you might be out of the running for new business. Minimizing test times increases capacity and keeps you flexible to win more deals. |
| **Reducing costs per unit of production** | When dealing in high volumes, the smallest difference in cost per unit can have a big impact on profitability. With faster test times, less equipment/personnel is required to complete the same number of products, which means less cost per unit manufactured. |
| **Increasing speed to market** | When a customer is ready to place a high volume order, they're often under tight time constraints. Building a test system that speeds up the manufacturing line can become a competitive advantage. |
| **Minimizing defective products and returns** | Speeding up testing can often mean compromising measurement quality, which increases the risk of unknowingly shipping defective products. Defective products are costly, not only to the bottom line, but also to your reputation with customers. |
| **Minimizing downtime and maintenance costs** | One damaged instrument can halt your manufacturing line for days or even weeks at a time. To get back to business, you'll have to spend time and money on things like troubleshooting the system to identify problems, ordering replacements, and re-testing products. |

### Opposing forces of speed, accuracy, and cost

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| **Speed** | |
| **Benefit** | Decreasing test time per unit allows increased throughput and/or fewer required test systems |
| **Trade-off** | Shortening the time of a test can decrease the number of test points which increases the likelihood of a false pass |
| **Accuracy** | |
| **Benefit** | High accuracy testing decreases the chances of faulty products which lowers cost and improves reputation |
| **Trade-off** | Achieving greater accuracy often means either requiring the recording of more test points - which will slow down test time - or requiring more expensive equipment |
| **Cost** | |
| **Benefit** | Spending less per unit in test translates to better profits and more competitive pricing |
| **Trade-off** | Lower cost instruments are often slower and/or less accurate |

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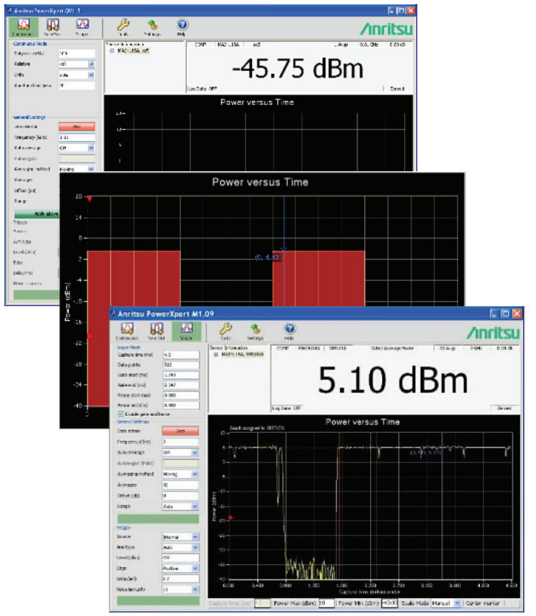
## Use Anritsu Microwave Universal USB Power Meters to speed up your test systems

Anritsu's MA24208A and MA24218A Microwave Universal USB Power Sensors have the fastest overall measurement speeds of any USB sensors in their class (>1,600 readings/s continuous and >11,000 readings/s buffered), enabling you to test the same amount of points in much less time. Therefore, you can speed up your measurements and reduce your costs without sacrificing accuracy and quality. Furthermore, with the best damage protection available (up to +30 dBm CW and +34 dBm peak at < 10 µs), you'll decrease your likelihood of instrument failure and downtime.


| Feature | Benefit |
|---|---|
| **Fastest measurement speeds in its class** | Speed up test time per unit, without increasing the probability of a false pass, with best-in-class measurement speeds of >1,600 readings/s continuous and >11,000 readings/s buffered. Other manufacturers may claim higher measurement speeds, but only for a limited number of measurements. That's like saying your car can go 200 mph, but only for 100 ft. |
| **Best overall damage protection** | Protect your investment and avoid costly downtime with best-in-class damage protection for USB power sensors (up to +30 dBm CW and +34 dBm peak at < 10 µs). |
| **High accuracy over a wide temperature range** | Have confidence in your test results and ship higher quality products with accuracy of 3-3.5% over the wide temperature range of 0 and 50ºC (MA24208A, average power) |
| **Worldwide calibration centers** | Keep your test systems running longer by minimizing the amount of time your equipment has to be out for service. With local service centers worldwide, you'll be assured of high accuracy measurements with minimal downtime. |
| **Free PowerXpert software** | Expand your test capabilities without having to spend extra on your power sensor software. PowerXpert's™ full range of features, like Scope Mode and Time Slot Mode, are all accessible in this powerful, complementary software application. |

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