

one source. one solution."

# Plastic Encapsulated Microcircuits (PEMs)



One Complete PEM Qual Solution.



Micross offers a one-source solution for a broad array of IC test, qualification and related services to support Aerospace & Defense customer applications and programs.

The usage of PEMs offers many benefits to overcome the challenges of sourcing hi-reliability or custom component solutions. The PEM Qualification Process validates a device's application performance by screening out unsuitable and unreliable parts through mechanical, environmental and electrical testing, as well as an analysis of the construction of the device through DPA.

One Source. One Solution.™



## **PEM Quals**

| <ul> <li>Key Differentiators</li> <li>Micross &amp; Hi-Rel Labs offer one turnkey solution for<br/>PEM Qualifications:</li> <li>Screening/Qualification &amp; Testing done by Micross</li> <li>Destructive Physical Analysis (DPA) and<br/>Failure Analysis (FA) performed by Hi-Rel Labs</li> </ul> | <ul> <li>Micross, Inc.</li> <li>✓ 40+ years of expertise in up-screening &amp; testing nearly all types of electronic components (Discretes, Passives, Linears, Memory, FPGAs, ADC/DAC)</li> <li>✓ Complete Turnkey Component Modification – solder dip, reball &amp; mechanically-modify components</li> </ul> |
|--|---|
|  | CSP Capabilities – Micross can source die & rebuild a device into a custom CSP to pass PEM Qual   |
| Advantages   | Hi-Rel Labs, Inc.   |
| The advantages of sourcing plastic COTS over a custom ceramic or metal solution include:   | The premier authority in DPA  |
| <ul> <li>Greater selection of components &amp; availability of different<br/>packages</li> </ul>   | Specializes in FA & DPA; adheres to standards set by DLA  |
| Lower cost of BOM – less expensive than ceramic  | Advanced capability in DPA on copper wire devices using a laser ablation decapsulation process  |
| Smaller and thinner/ Lightweight   |   |
| Rapid procurement  |   |
| Can easily withstand mechanical shock and vibration as   |   |

One Source. One Solution.<sup>™</sup> – One Complete PEM Qual Solution.

#### **ABOUT MICROSS**

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Micross (www.micross.com) is the global one-source provider of Bare Die & Wafers, Advanced Interconnect Technology, Custom Packaging & Assembly, Component Modification Services, Electrical & Environmental Testing and Hi-Rel Products to manufacturers and users of semiconductor devices. In business for over 40 years, our extensive hi-reliability capabilities serve the Aerospace & Defense, Space, Medical and Industrial markets. Micross possesses the sourcing, packaging, assembly, engineering, test and logistics expertise needed to support an application throughout its entire program cycle. For more information about PEM-Quals and our complete array of up-screening and test services, contact:

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