Surface Mount Inductors with Established Reliability Rating

Gowanda is First in Industry to Offer ER SMT Inductors for Military RF Applications

Gowanda, NY (USA) - Gowanda Electronics, a designer and manufacturer of precision electronic components for radio frequency and power applications, announces the introduction of the industry’s first off-the-shelf RF Surface Mount (SMT) Inductors with Established Reliability (ER) rating. The first-ever ER SMT series – Gowanda ER3013 – was developed by Gowanda in response to a market need for surface mount options to the traditional leaded (thru-hole) designs.

Surface mount configurations lend themselves to higher-efficiency “pick and place” circuit board assembly processes versus the more laborious, multi-step thru-hole assembly methods. The introduction of Gowanda’s ER SMT series will enable faster assembly processing, thereby helping to reduce the cost of high-reliability electronic systems where ER components are utilized. The introduction of this new series also sends a message to the design community – that SMT designs are attainable even for some of the most challenging high-reliability components.

“This development from Gowanda not only breaks new ground but also helps to assure design engineers that their next generation designs will have access to the necessary components – especially since Gowanda plans to introduce more ER SMT designs in the future,” said Don McElheny, CEO of Gowanda Components Group.

The ER3013 series meets the military’s Qualified Products List (QPL) requirements for Established Reliability to failure rate level M and addresses MIL-PRF-39010 slash numbers /19, /20 and /21. This qualification required extensive testing for electrical, environmental, mechanical and thermal performance. Level M represents the first level of failure rating for off-the-shelf inductors for high-reliability applications. In its ongoing commitment to the military market, Gowanda intends to achieve higher level failure ratings (Level P, then Level R) as ongoing testing continues to accumulate the hours necessary to attain those ratings on this ER SMT series.

Gowanda's ER3013 series is designed for RF applications in military, aerospace and space – including defense and NASA communities – for use in communication, guidance, security, radar, test & evaluation and special mission applications.

The performance range provided by the ER3013 series includes inductance from 0.10 to 1000 µH, Q min from 25 to 55, SRF MHz min from 3.4 to 680, DCR Ohms max from 0.08 to 72, and current rating mA DC from 28 to 1380. The specific MIL-PRF-39010 slash number determines the core type (phenolic, powdered iron or ferrite) and operating temperature range (-55°C to +105°C or -55°C to +125°C). See table and ER 3013 datasheet link on next page.

continued . . .
Performance Ranges for Gowanda’s MIL-PRF-39010 Level M Established Reliability Surface Mount Series

<table>
<thead>
<tr>
<th>Gowanda Series</th>
<th>Military Slash Numbers</th>
<th>L μH</th>
<th>Q Min</th>
<th>SRF MHz Min</th>
<th>DCR Ohms Max</th>
<th>Current Rating mA DC</th>
</tr>
</thead>
<tbody>
<tr>
<td>ER3013</td>
<td>M39010/19</td>
<td>0.10 – 1.0</td>
<td>25 - 40</td>
<td>230 - 680</td>
<td>0.08 – 1.0</td>
<td>390 - 1380</td>
</tr>
<tr>
<td></td>
<td>M39010/20</td>
<td>1.1 - 27</td>
<td>25 - 50</td>
<td>20 - 150</td>
<td>0.18 – 3.5</td>
<td>140 - 620</td>
</tr>
<tr>
<td></td>
<td>M39010/21</td>
<td>30 - 1000</td>
<td>30 - 45</td>
<td>3.4 - 24</td>
<td>3.4 – 72</td>
<td>28 - 130</td>
</tr>
</tbody>
</table>

Gowanda has been designing and manufacturing RF and power inductors – both thru-hole and SMT – for the military’s Qualified Products List for many years. That experience combined with several successful ER thru-hole qualifications set the stage for the development of the ER3013 SMT inductors, enhanced by the company’s technical expertise and long-term, interactive relationships with OEMs (including government contractors) and the Defense Department’s Defense Logistics Agency.

Helpful Links:
• ER3013 Series Information: www.gowanda.com/catalog/qpl/ER3013-detail.html
• QPL Product Line: www.gowanda.com/qpl-products.html

Note: if the datasheet link does not work correctly (due to updating of pdf files) please use the series information website link above to navigate to the most current version of the datasheet.

For more information regarding pricing, delivery, higher reliability or upscreening requirements please contact Gowanda Electronics at USA +1-716-532-2234 or sales@gowanda.com.

For more information about QPL go to the website for Defense Logistics Agency DLA Land and Maritime (previously referred to as DSCC) at http://www.dla.mil/LandandMaritime.aspx.

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