



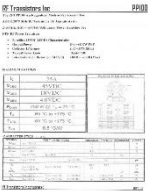






FROM: Telstar Electronics Engineering  
 SUBJECT: Memo on Sub-Standard High Power RF Devices  
 LAST REVISED: January 5, 2017

There is only one legitimate manufacturer of high power/low voltage bipolar type RF transistors at this time. Macom (<http://www.macom.com/>) remains the only semiconductor company that manufactures these devices that has traceable quality standards. Macom has been in business for over 50 years, and are a major supplier to the US military. Telstar Electronics adheres to strict engineering standards and only uses quality RF semiconductors from reputable manufacturers.

## WARNING

The following companies are sourcing sub-standard semiconductors with the following issues:

<p>DEI (2SC2290, 2SC2879)</p> 	<ul style="list-style-type: none"> <li>• No traceable manufacturer.</li> <li>• No device datasheet.</li> <li>• No website.</li> <li>• No fabrication location information.</li> <li>• No component specifications.</li> <li>• No quality standards.</li> <li>• No <math>h_{FE}</math> code on device.</li> </ul>
<p>RFT (PP60, PP80, PP100)  <a href="http://www.rf-transistor.com/category/Shop-1">http://www.rf-transistor.com/category/Shop-1</a></p> 	<ul style="list-style-type: none"> <li>• No traceable manufacturer.</li> <li>• No website.</li> <li>• No fabrication location information.</li> <li>• Falsified device datasheet (Click Image to View)</li> </ul>  <ul style="list-style-type: none"> <li>• No quality standards.</li> <li>• No date/lot code on device.</li> </ul>
<p>“Mystery” Transistors        (Black coated ceramic cap)</p> 	<ul style="list-style-type: none"> <li>• No component markings.</li> <li>• No traceable manufacturer.</li> <li>• No device datasheet.</li> <li>• No website.</li> <li>• No part number.</li> <li>• No fabrication location information.</li> <li>• No quality standards.</li> <li>• No date/lot code on device.</li> <li>• No <math>h_{FE}</math> code on device.</li> <li>• No manufacturer’s logo on device.</li> </ul>

<p>Eleflow (2SC, MRF)  <a href="http://www.eleflow.com/">http://www.eleflow.com/</a></p>	<ul style="list-style-type: none"> <li>• Most device datasheets are direct copies of original manufacturers.</li> <li>• No quality standards.</li> </ul>
<p>Advanced Semiconductor Incorporated  <a href="http://www.advancedsemiconductor.com/index.html">http://www.advancedsemiconductor.com/index.html</a></p>	<ul style="list-style-type: none"> <li>• This India based company has an impressive web site.</li> <li>• Company doesn't respond to inquiries about quality manual or standards.</li> </ul>
<p>Huagao Semiconductor Co., Ltd.  (HG Semiconductor)  <a href="http://www.hgsemi.com/">http://www.hgsemi.com/</a></p> 	<ul style="list-style-type: none"> <li>• This China based company has an impressive web site.</li> <li>• Most specifications are direct copies of original manufacturers.</li> <li>• Quality documents shown are incomplete or expired.</li> <li>• Company doesn't respond to inquiries about quality manual or standards.</li> <li>• No h<sub>FE</sub> code on device.</li> </ul>
<p>American Microsemiconductor (Distributor)  <a href="http://www.americanmicrosemi.com/">http://www.americanmicrosemi.com/</a></p> 	<ul style="list-style-type: none"> <li>• No manufacturer's datasheet.</li> <li>• Quality documents shown are incomplete.</li> <li>• No mention of quality manual or standards.</li> <li>• No traceable manufacturer.</li> <li>• No fabrication location information.</li> <li>• No h<sub>FE</sub> code on device.</li> <li>• No manufacturer logo on device.</li> </ul>
<p>EKL Components - MOSFETs  (ERF-2030, ERF-7530, EN-1230, EN369DR, EN-369FN)</p>	<ul style="list-style-type: none"> <li>• No traceable manufacturer.</li> <li>• No website.</li> <li>• No fabrication location information.</li> <li>• No quality standards.</li> </ul>
<p>UK</p> 	<ul style="list-style-type: none"> <li>• No traceable manufacturer.</li> <li>• No device datasheet.</li> <li>• No website.</li> <li>• No fabrication location information.</li> <li>• No quality standards.</li> <li>• No h<sub>FE</sub> code on device.</li> </ul>

Spectrum Devices

<http://spectrumdevices.com/>



**Spectrum Devices Corporation**  
RF Power Bipolar VDMOS Custom RF Design

- No quality standards.
- Device datasheets are incomplete.
- No fabrication location information.