**REPLACEMENT PART REFERENCE GUIDE:**

**ORIGINAL PART:** MAV-11SM+ & MSA-1105 (Avagotech)

**REPLACEMENT PART:** MAV-11BSM+

This replacement part has been judged by Mini-Circuits Engineering as a suitable replacement part.

**APPLICATION CIRCUITS**

**ORIGINAL PART:**
MAV-11SM+ & MSA-1105 (Avagotech)

**REPLACEMENT PART:**
MAV-11BSM+

**CONCLUSION:**

1) **FORM-FIT-FUNCTIONAL COMPATIBLE:** Same Circuit and PCB Layout and external components

2) Typical Performance Comparison:

<table>
<thead>
<tr>
<th>Performance</th>
<th>MAV-11SM+ / MSA-1105</th>
<th>MAV-11BSM+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition (GHz)</td>
<td>MAV-11SM+ / MSA-1105</td>
<td>MAV-11BSM+</td>
</tr>
<tr>
<td>Gain (dB)</td>
<td>1.0</td>
<td>10.5</td>
</tr>
<tr>
<td>Noise Figure (dB)</td>
<td>0.5</td>
<td>3.6</td>
</tr>
<tr>
<td>Pout 1dB (dBm)</td>
<td>0.5</td>
<td>17.5</td>
</tr>
<tr>
<td>Output IP3 (dBm)</td>
<td>0.5</td>
<td>+30</td>
</tr>
<tr>
<td>Input Return Loss (db)</td>
<td>0.05-1</td>
<td>14</td>
</tr>
<tr>
<td>Output Return Loss (db)</td>
<td>0.05-1</td>
<td>11.5</td>
</tr>
<tr>
<td>Operating Voltage (V)</td>
<td>---</td>
<td>See table above</td>
</tr>
<tr>
<td>Operating Current (mA)</td>
<td>---</td>
<td>60</td>
</tr>
<tr>
<td>Status</td>
<td>---</td>
<td>Qualified, last time buy</td>
</tr>
</tbody>
</table>

**Notes:**

a. Suitability for model replacement within a particular system must be determined by and is solely the responsibility of the customer based on, among other things, electrical performance criteria, stimulus conditions, application, compatibility with other components and environmental conditions and stresses.

b. The MSA-1105 part number is used for identification and comparison purposes only.
COMPARISON PERFORMANCE CURVES:

- **Gain vs. Frequency**
  - MAV-11BSM+
  - MAV-11SM+/MSA-1105

- **Pout 1dB vs. Frequency**
  - MAV-11BSM+
  - MAV-11SM+/MSA-1105

- **Input Return Loss vs. Frequency**
  - MAV-11BSM+
  - MAV-11SM+/MSA-1105

- **Output Return Loss vs. Frequency**
  - MAV-11BSM+
  - MAV-11SM+/MSA-1105

- **Noise Figure vs. Frequency**
  - MAV-11BSM+
  - MAV-11SM+/MSA-1105

- **OIP3 vs. Frequency**
  - MAV-11BSM+
  - MAV-11SM+/MSA-1105

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