SC1894 Wideband Performance results with NXP A2I25D025N
NXP A2I25D025N Power Amplifier Data

• Amplifier Data
  > NXP A2I25D025N, Doherty, LDMOS
  > Operating Frequency: 2100-2900 MHz
  > Frequency tested: 2660 MHz
  > Gain = ~29dB; Psat = P3dB= ~ 45dBm
  > NXP driver between SC1894-EVK2400 and NXP A2I25D025N: MMG20241H
  > NXP driver between MXG and SC1894-EVK2400: MMG3014N
  > Vdd=28V

Vdd = 28V
NXP A2I25D025N Performance Data Summary at 2660MHz

- Requirement is -50dBc

<table>
<thead>
<tr>
<th>Output Power (dBm) @-50dBc ACLR</th>
<th>PAE (%)</th>
<th>PAR (dB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 MHz LTE</td>
<td>38</td>
<td>40</td>
</tr>
<tr>
<td>2x20 MHz LTE</td>
<td>37</td>
<td>37.5</td>
</tr>
<tr>
<td>2x20 MHz LTE</td>
<td>35</td>
<td>32</td>
</tr>
<tr>
<td>3x20 MHz LTE</td>
<td>35</td>
<td>32</td>
</tr>
</tbody>
</table>

- PAE numbers for complete module with 29dB gain and bias supplies included.
Test Set-up with SC1894 and NXP A2I25D025N

NXP A2I25D025N
25 Watt Peak, Doherty PA
With NXP MMG20241H driver
LTE20MHz 7dB PAR: 38dBm out; 38% efficiency

Note: Rise in ACLR in back-off due to noise floor of spectrum analyzer.
LTE2x20MHz 7dB PAR: 37dBm out; 37.5% efficiency
LTE2x20MHz 10dB PAR: 35dBm out; 32 efficiency

2x20 MHz LTE 10dB PAR with SC1894 Smooth Mode

ACLR (dBc)

PA Output Power (dBm)

Efficiency (%)
LTE3x20MHz: 35dBm out; 32% efficiency