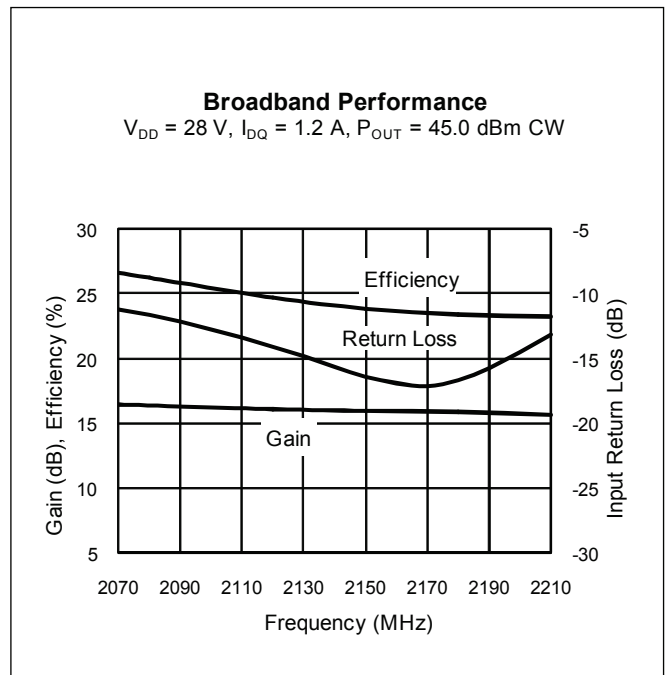
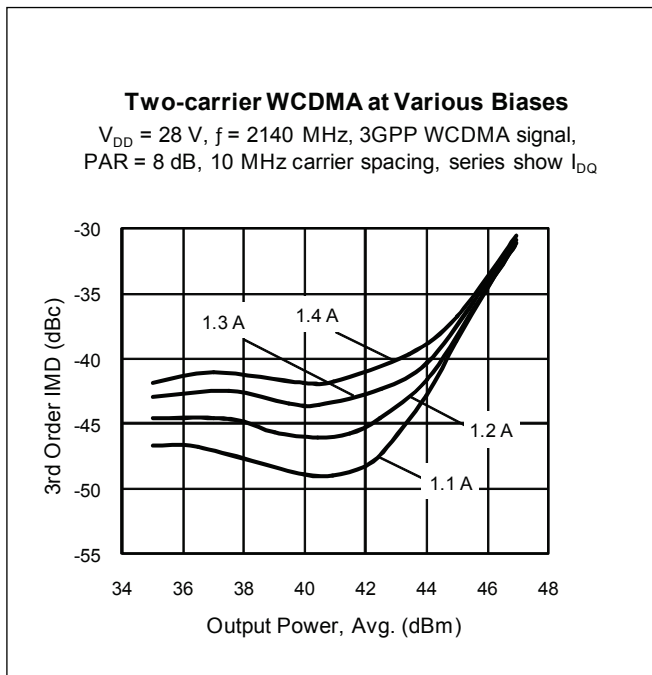


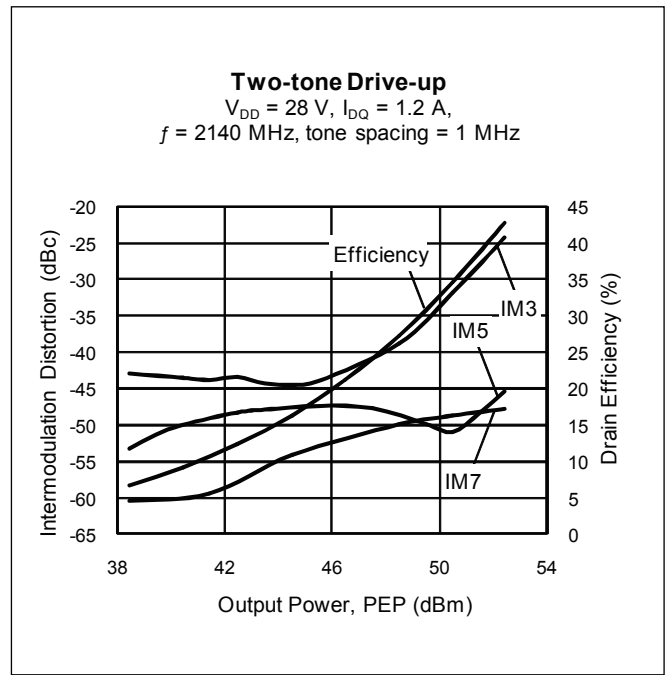
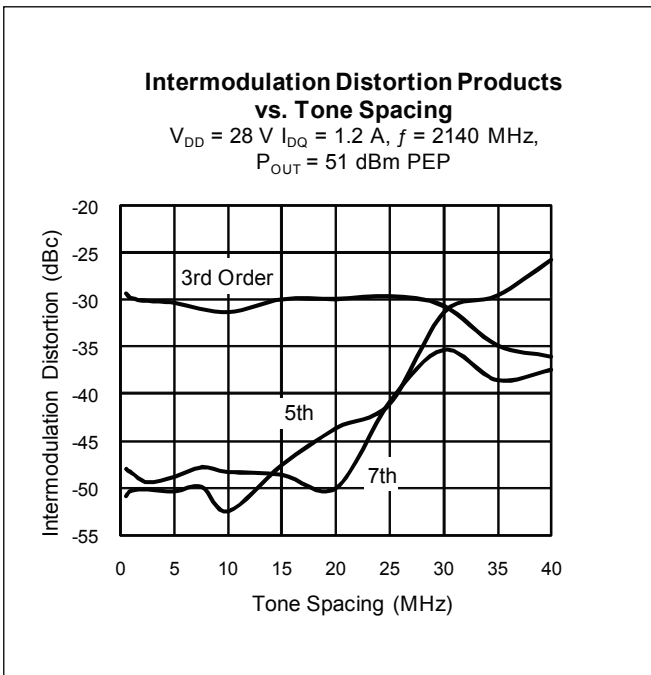
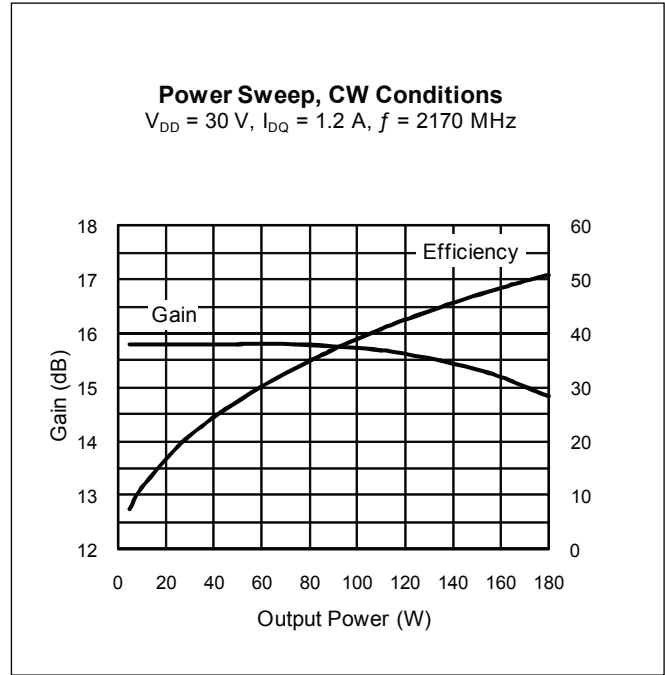
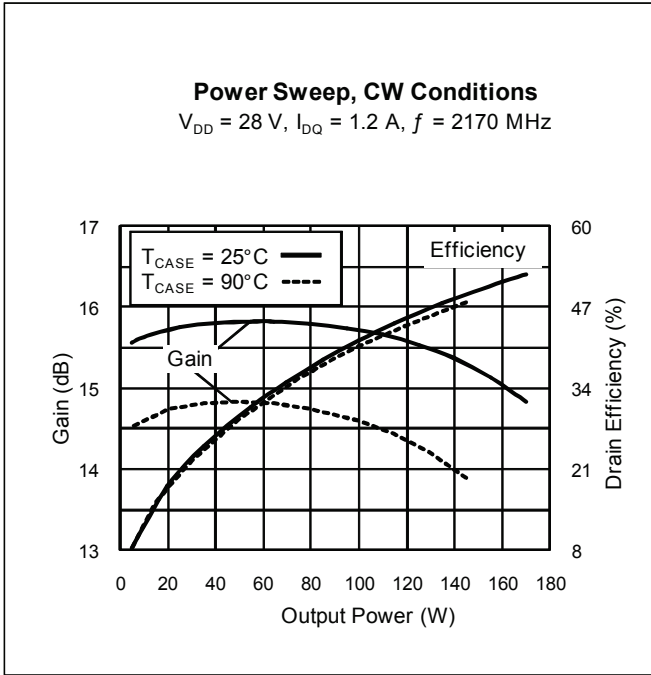
Ordering Information

| Type and Version | Package Outline | Package Description | Shipping |
|---------------------|-----------------|---|-------------|
| PTFA211801E V5 | H-36260-2 | Thermally-enhanced slotted flange, single-ended | Tray |
| PTFA211801E V5 R250 | H-36260-2 | Thermally-enhanced slotted flange, single-ended | Tape & Reel |

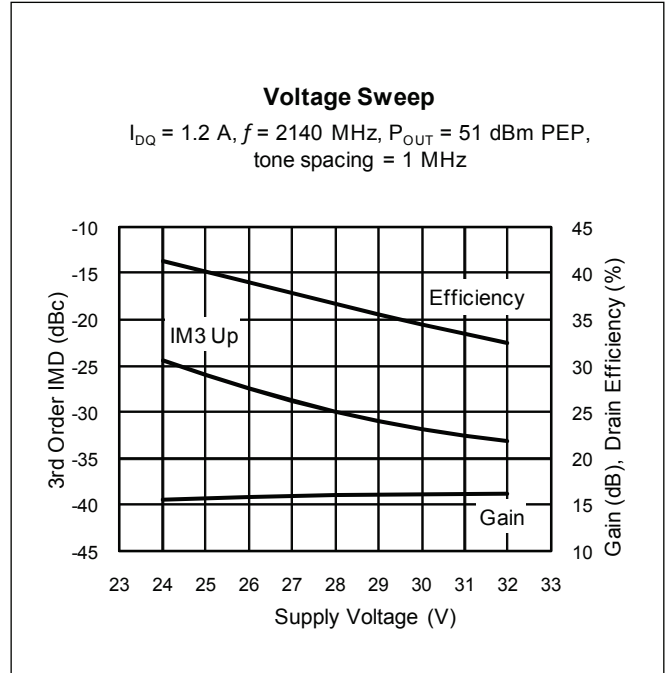
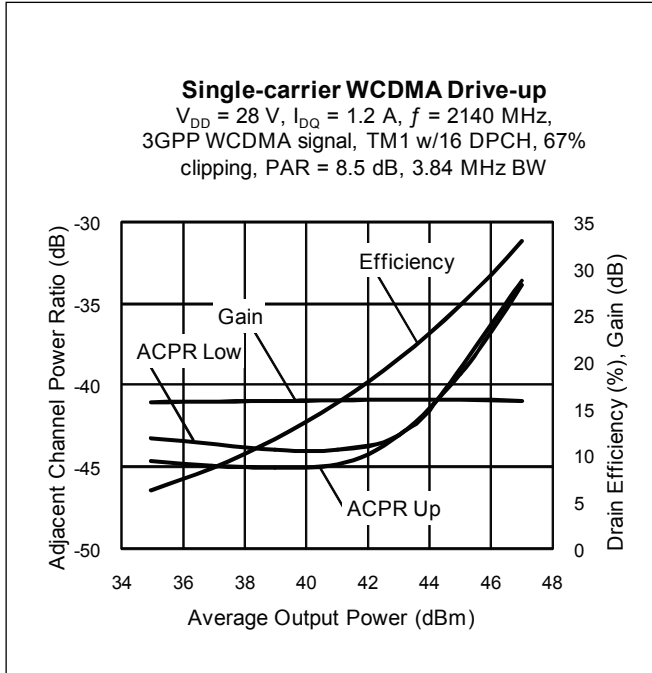
Typical Performance (data taken in a production test fixture)



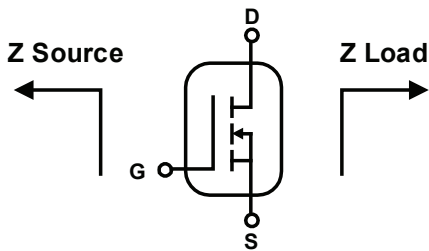
Typical Performance (cont.)



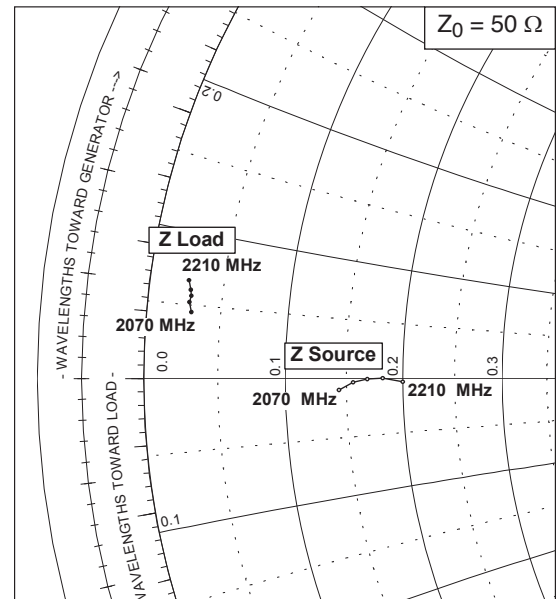
Typical Performance (cont.)



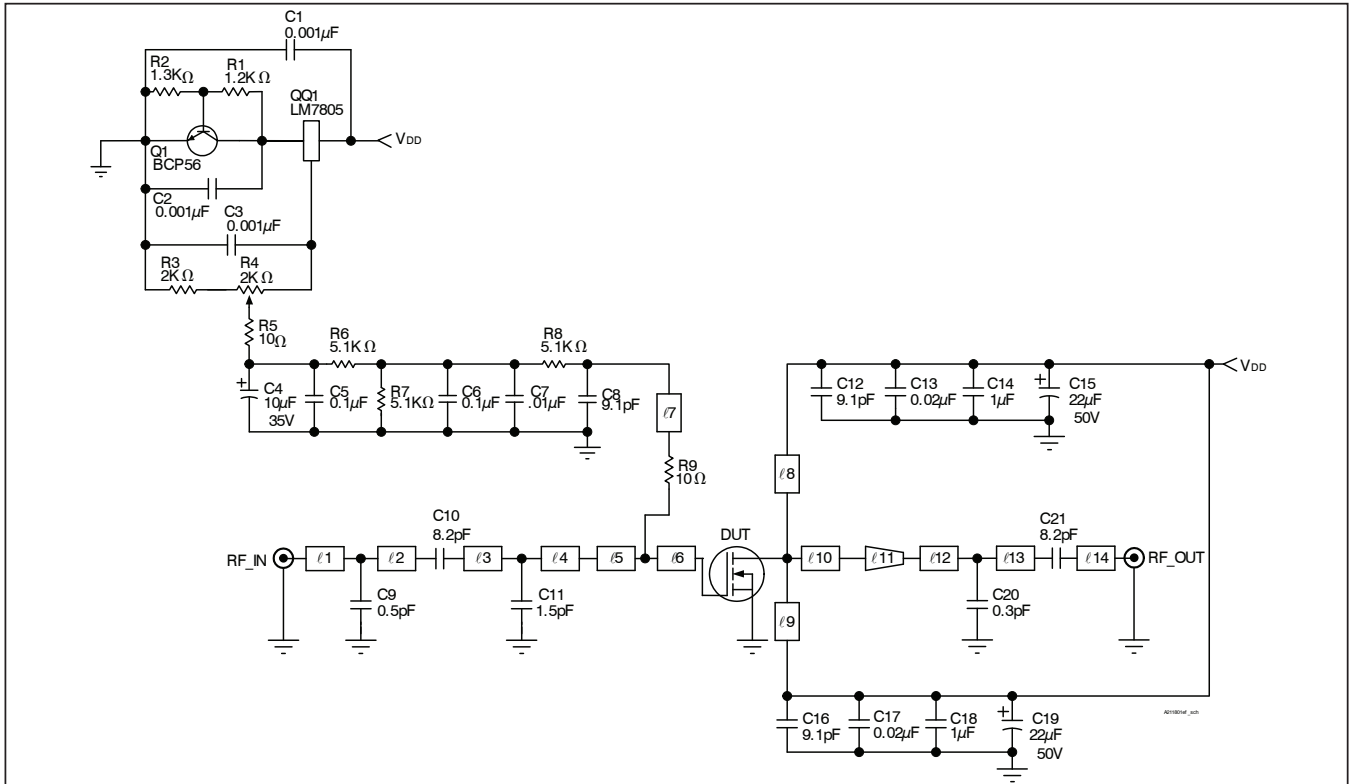
Broadband Circuit Impedance



| Frequency MHz | Z Source Ω | | Z Load Ω | |
|------------------|-------------------|------|-----------------|-----|
| | R | jX | R | jX |
| 2070 | 7.2 | -0.5 | 1.5 | 2.3 |
| 2110 | 7.8 | -0.2 | 1.4 | 2.6 |
| 2140 | 8.4 | -0.0 | 1.4 | 2.8 |
| 2170 | 9.1 | 0.0 | 1.4 | 3.0 |
| 2210 | 10.0 | -0.2 | 1.3 | 3.4 |



Reference Circuit

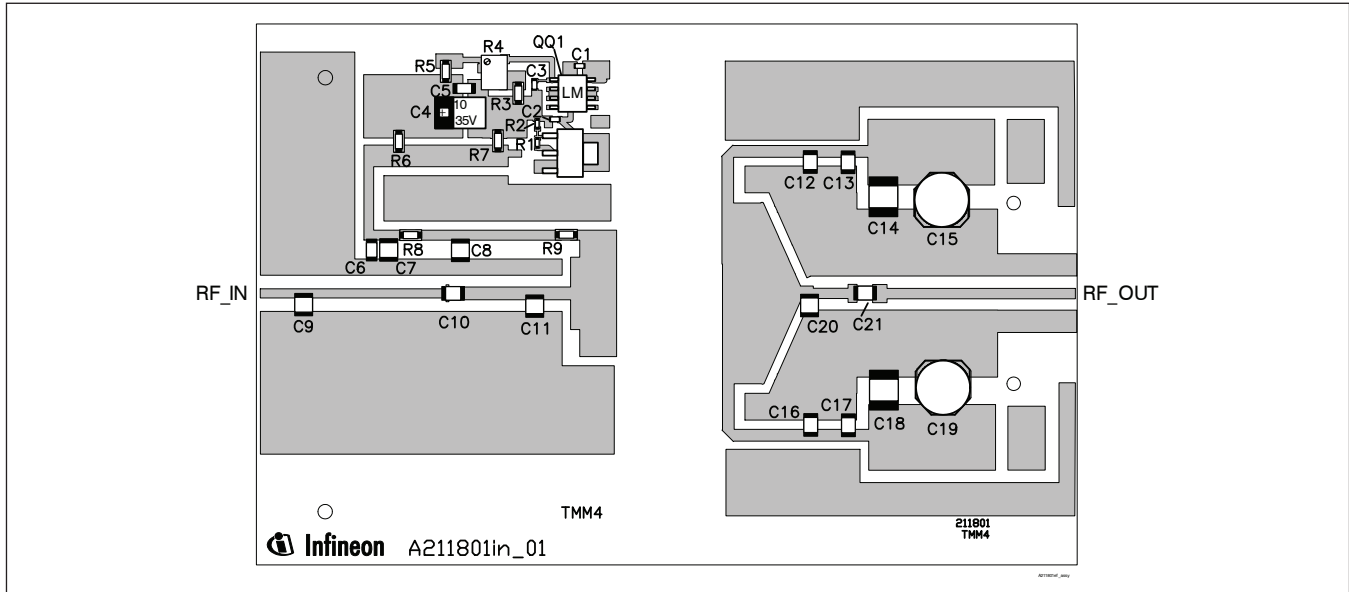


Reference circuit schematic for $f = 2140 \text{ MHz}$

Electrical Characteristics at 2140 MHz

| Transmission Line | Electrical Characteristics | Dimensions: L x W (mm) | Dimensions: L x W (in.) |
|-------------------|--|------------------------|-------------------------|
| l1 | 0.097 λ , 50.0 Ω | 7.37 x 1.40 | 0.290 x 0.055 |
| l2 | 0.267 λ , 50.0 Ω | 19.86 x 1.40 | 0.782 x 0.055 |
| l3 | 0.136 λ , 42.0 Ω | 10.24 x 1.85 | 0.403 x 0.073 |
| l4 | 0.087 λ , 42.0 Ω | 6.50 x 1.85 | 0.256 x 0.073 |
| l5 | 0.018 λ , 11.4 Ω | 1.24 x 10.24 | 0.049 x 0.403 |
| l6 | 0.077 λ , 6.9 Ω | 5.23 x 17.78 | 0.206 x 0.700 |
| l7 | 0.207 λ , 48.0 Ω | 15.70 x 1.50 | 0.618 x 0.059 |
| l8, l9 | 0.256 λ , 45.0 Ω | 19.30 x 1.65 | 0.760 x 0.065 |
| l10 | 0.087 λ , 5.0 Ω | 5.84 x 25.40 | 0.230 x 1.000 |
| l11 (taper) | 0.073 λ , 5.0 Ω / 40.0 Ω | 5.59 x 25.40 / 1.98 | 0.220 x 1.000 / 0.078 |
| l12 | 0.019 λ , 40.0 Ω | 1.45 x 1.98 | 0.057 x 0.078 |
| l13 | 0.087 λ , 50.0 Ω | 6.65 x 1.40 | 0.262 x 0.055 |
| l14 | 0.403 λ , 50.0 Ω | 30.73 x 1.40 | 1.210 x 0.055 |

Reference Circuit (cont.)



Reference circuit assembly diagram (not to scale)*

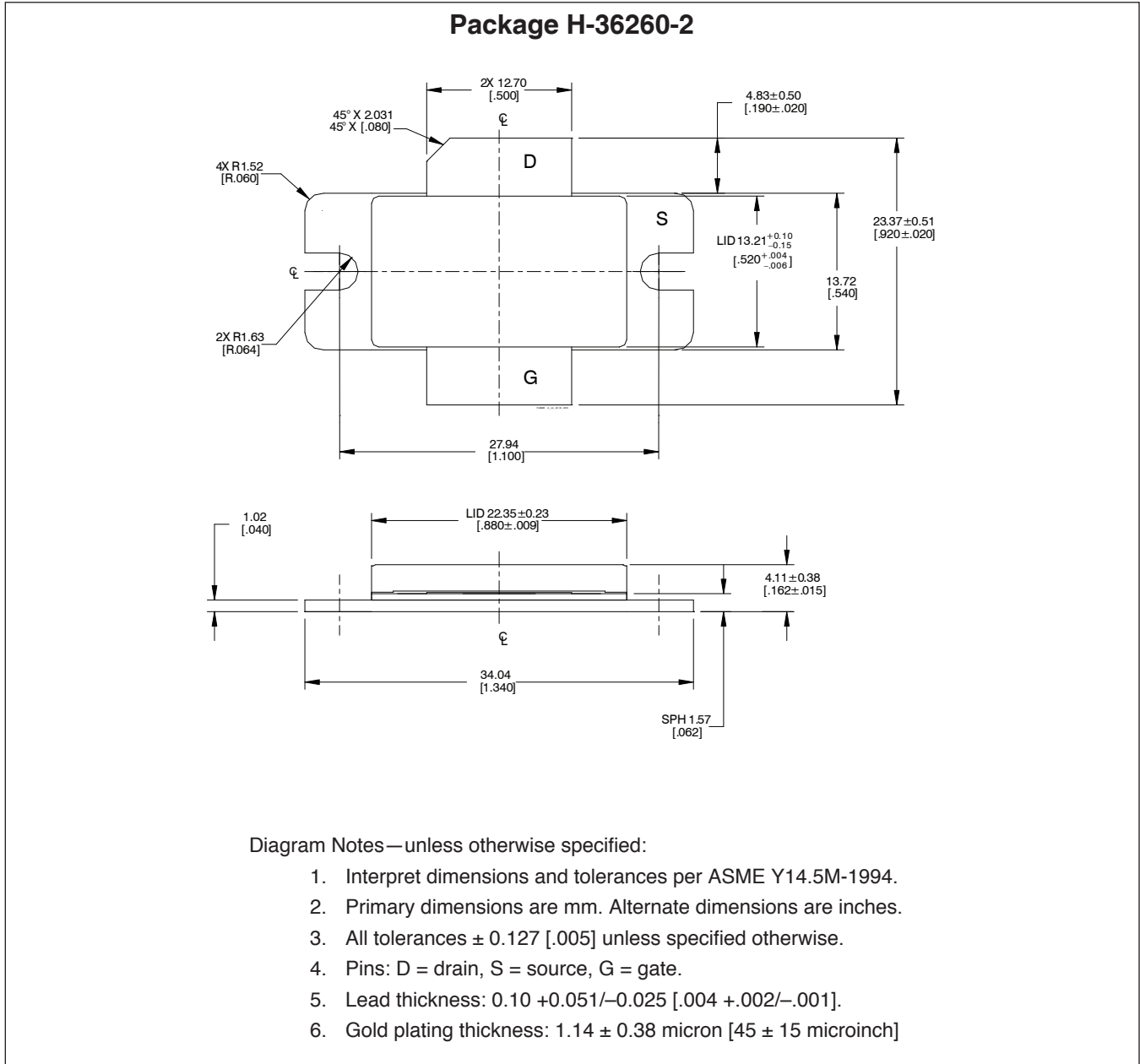
Circuit Assembly Information

| | | | |
|-----|---|------------------|--------------|
| DUT | PTFA211801E | LDMOS Transistor | |
| PCB | 0.76 mm [.030"] thick, $\epsilon_r = 4.5$ | Rogers TMM4 | 2 oz. copper |

| Component | Description | Suggested Manufacturer | P/N |
|--------------|--|------------------------|-----------------|
| C1, C2, C3 | Capacitor, 0.001 μ F | Digi-Key | PCC1772CT-ND |
| C4 | Tantalum capacitor, 10 μ F, 35 V | Digi-Key | PCS6106TR-ND |
| C5, C6 | Capacitor, 0.1 μ F | Digi-Key | PCC104BCT |
| C7 | Capacitor, 0.01 μ F | ATC | 200B103 |
| C8, C12, C16 | Ceramic capacitor, 9.1 pF | ATC | 100B 9R1 |
| C9 | Ceramic capacitor, 0.5 pF | ATC | 100B 0R5 |
| C10, C21 | Ceramic capacitor, 8.2 pF | ATC | 100B 8R2 |
| C11 | Ceramic capacitor, 1.5 pF | ATC | 100B 1R5 |
| C13, C17 | Ceramic capacitor, 0.02 μ F | ATC | 200B 203 |
| C14, C18 | Ceramic capacitor, 1 μ F | ATC | 920C105 |
| C15, C19 | Electrolytic capacitor, 22 μ F, 50 V | Digi-Key | PCE3374CT-ND |
| C20 | Ceramic capacitor, 0.3 pF | ATC | 100B 0R3 |
| Q1 | Transistor | Infineon Technologies | BCP56 |
| QQ1 | Voltage regulator | National Semiconductor | LM7805 |
| R1 | Chip resistor, 1.2 k Ω | Digi-Key | P1.2KGCT-ND |
| R2 | Chip resistor, 1.3 k Ω | Digi-Key | P1.3KGCT-ND |
| R3 | Chip resistor, 2 k Ω | Digi-Key | P2KECT-ND |
| R4 | Potentiometer, 2 k Ω | Digi-Key | 3224W-202ETR-ND |
| R5, R9 | Chip resistor, 10 Ω | Digi-Key | P10ECT-ND |
| R6, R7, R8 | Chip resistor, 5.1 k Ω | Digi-Key | P5.1KECT-ND |

* Gerber Files for this circuit available on request

Package Outline Specifications



Find the latest and most complete information about products and packaging at the Infineon Internet page <http://www.infineon.com/rfpower>

Revision History: 2011-01-11 Data Sheet

Previous Version: 2010-08-04, Data Sheet

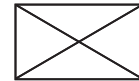
| Page | Subjects (major changes since last revision) |
|------|--|
| 1 | Updated ESD protection feature |
| All | Removed earless package |
| | |
| | |
| | |

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