onsemi

SMA3117

| | | Conditions | Ratings | | | |
|-----------------|--|--|---------|------|------|------|
| Symbol | Parameter | | Min | Тур | Max | Unit |
| I _{CC} | Circuit Current | | 18.5 | 22.7 | 28.0 | mA |
| Gp | Power Gain | f = 1 GHz | 29.5 | 31.2 | 32.5 | dB |
| | | f = 2.2 GHz | 30.5 | 33.5 | 35.5 | |
| ISL | Isolation | f = 1 GHz | 35.0 | 37.6 | - | dB |
| | | f = 2.2 GHz | 34.0 | 36.5 | - | dB |
| RLin | Input Return Loss | f = 1 GHz | 9.0 | 11.2 | - | dB |
| | | f = 2.2 GHz | 4.5 | 6.0 | - | |
| RLout | Output Return Loss | f = 1 GHz | 11.0 | 14.3 | - | dB |
| | | f = 2.2 GHz | 12.0 | 16.3 | - | dB |
| NF | Noise Figure | f = 1 GHz | - | 4.1 | 5.0 | dB |
| | | f = 2.2 GHz | - | 3.9 | 5.0 | |
| Po(1dB) | Gain 1 dB Compression | f = 1 GHz | 7.5 | 9.8 | - | dBm |
| | Output Power (Note 1) | f = 2.2 GHz | 3.7 | 5.7 | - | 1 |
| fu | Upper Limit Operating Frequency (Note 1) | 3 dB down below flat gain at f = 1 GHz | - | 3.0 | - | GHz |

ELECTRICAL CHARACTERISTICS (T_A = 25°C, V_{CC} = 5 V, Z_s = Z_L = 50 Ω)

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions. 1. On evaluation board

NOTE: Pay attention to handling since it is liable to be affected by static electricity due to the high frequency process adopted.

Test Circuit



Figure 1. Test Circuit

Evaluation Board



| Symbol | Value | |
|--------|---------|--|
| C1, C2 | 100 pF | |
| C3 | 1000 pF | |
| L1 | 100 nH | |

Figure 2. Evaluation Board

TYPICAL PERFORMANCE CHARACTERISTICS

SMA3117

TYPICAL PERFORMANCE CHARACTERISTICS (continued)







SC-88FL / MCPH6 CASE 419AS **ISSUE A**

DATE 28 SEP 2022



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BOTTOM VIEW

NDTES:

- NO INDUSTRY STANDARD APPLIES TO 1. THIS PACKAGE.
- 2. ALL DIMENSIONS ARE IN MILLIMETERS.
- 3. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND THE BAR PROTRUSIONS.

| лтм | MILLIMETERS | | | | |
|-------------|-------------|------|------|--|--|
| MIII | MIN. | NDM. | MAX. | | |
| А | 0.80 | 0.85 | 0,90 | | |
| A1 | 0.00 | | 0.02 | | |
| b | 0,25 | 0.30 | 0,40 | | |
| С | 0.12 | 0.15 | 0.25 | | |
| D | 1.94 | 2.00 | 2.06 | | |
| E | 1.54 | 1.60 | 1.66 | | |
| He | 2.05 | 2.10 | 2.15 | | |
| L | 0.19 | 0.25 | 0.31 | | |
| $\lfloor 1$ | 0.00 | 0.07 | 0,12 | | |
| | | | | | |

GENERIC **MARKING DIAGRAM***



= Pb-Free Package

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(Note: Microdot may be in either location)

*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "•", may or may not be present. Some products may not follow the Generic Marking.

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