

SMA3107

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$, $V_{CC} = 3\text{ V}$, $Z_S = Z_L = 50\ \Omega$)

Symbol	Parameter	Conditions	Ratings			Unit
			Min	Typ	Max	
I_{CC}	Circuit Current		4.3	6.0	7.7	mA
G_p	Power Gain	$f = 1\text{ GHz}$	21.0	23.5	26.0	dB
		$f = 2.2\text{ GHz}$	22.0	24.5	27.0	
I_{SL}	Isolation	$f = 1\text{ GHz}$	33.0	38.0	-	dB
		$f = 2.2\text{ GHz}$	40.0	45.0	-	
R_{Lin}	Input Return Loss	$f = 1\text{ GHz}$	18.0	23.0	-	dB
		$f = 2.2\text{ GHz}$	10.0	13.0	-	
R_{Lout}	Output Return Loss	$f = 1\text{ GHz}$	27.0	32.0	-	dB
		$f = 2.2\text{ GHz}$	10.0	13.0	-	
NF	Noise Figure	$f = 1\text{ GHz}$	-	3.1	4.3	dB
		$f = 2.2\text{ GHz}$	-	3.6	4.3	
$P_{O(1dB)}$	Gain 1 dB Compression Output Power	$f = 1\text{ GHz}$	-10	-8	-	dBm
		$f = 2.2\text{ GHz}$	-11.5	-9.5	-	
f_u	Upper Limit Operating Frequency	3 dB down below fl at gain at $f = 1\text{ GHz}$	-	2.8	-	GHz

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.

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

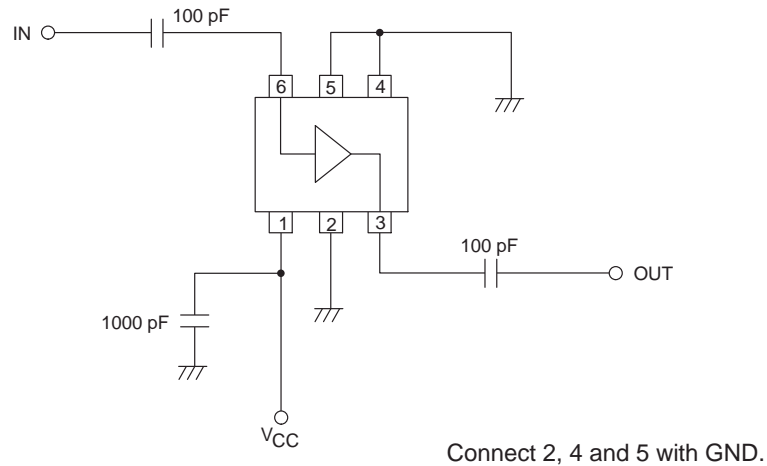
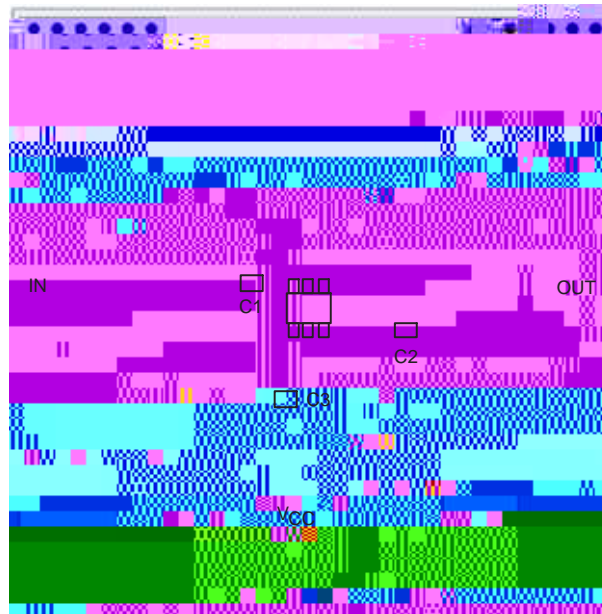


Figure 1. Test Circuit

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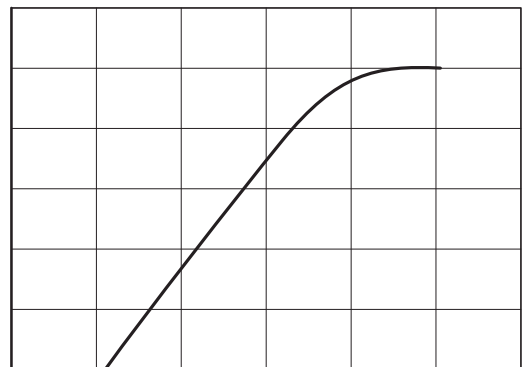
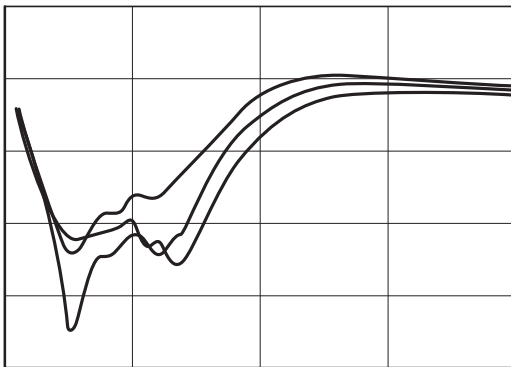
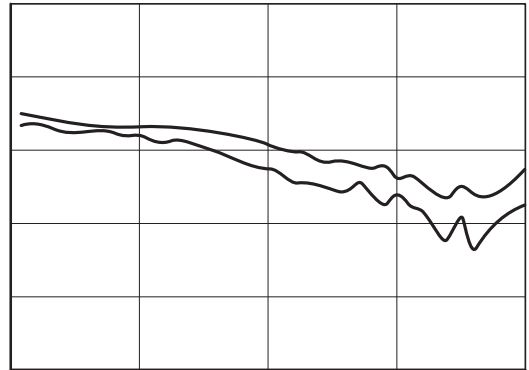


Symbol	Value
C1, C2	100 pF
C3	1000 pF

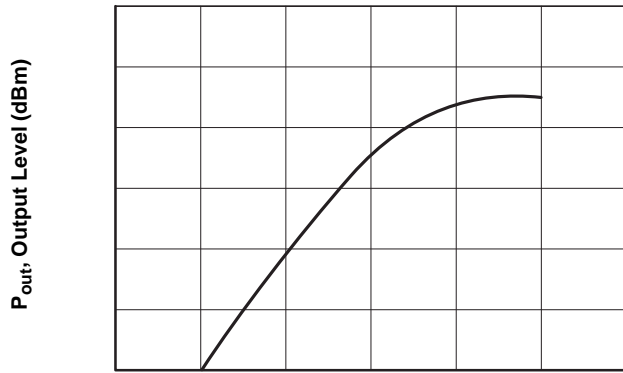
Figure 2. Evaluation Board

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TYPICAL PERFORMANCE CHARACTERISTICS



TYPICAL PERFORMANCE CHARACTERISTICS (continued)



P_{in} , Input Level (dBm)

Figure 9. $P_{out} - P_{in}$

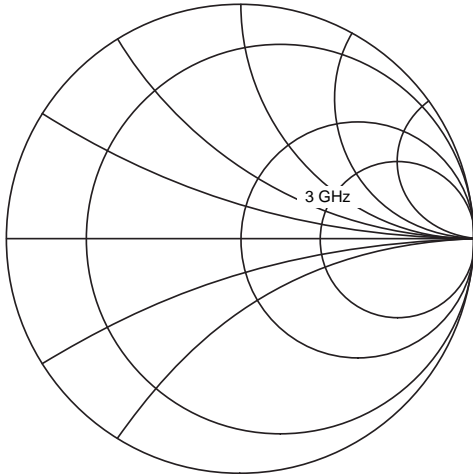
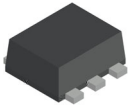


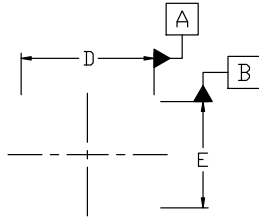
Figure 10. S Parameter, S_{11}

Figure 11. S Parameter, S_{22}



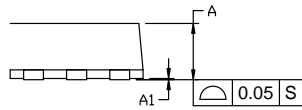
SC-88FL / MCPH6
CASE 419AS
ISSUE A

DATE 28 SEP 2022

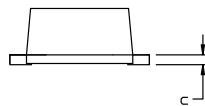


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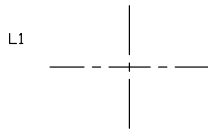
TOP VIEW



SIDE VIEW



FRONT VIEW



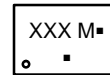
BOTTOM VIEW

NOTES:

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

DIM	MILLIMETERS		
	MIN.	NOM.	MAX.
A	0.80	0.85	0.90
A1	0.00	---	0.02
b	0.25	0.30	0.40
c	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
L1	0.00	0.07	0.12

GENERIC MARKING DIAGRAM*



- XXX = Specific Device Code
- M = Date Code
- = Pb-Free Package

(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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