

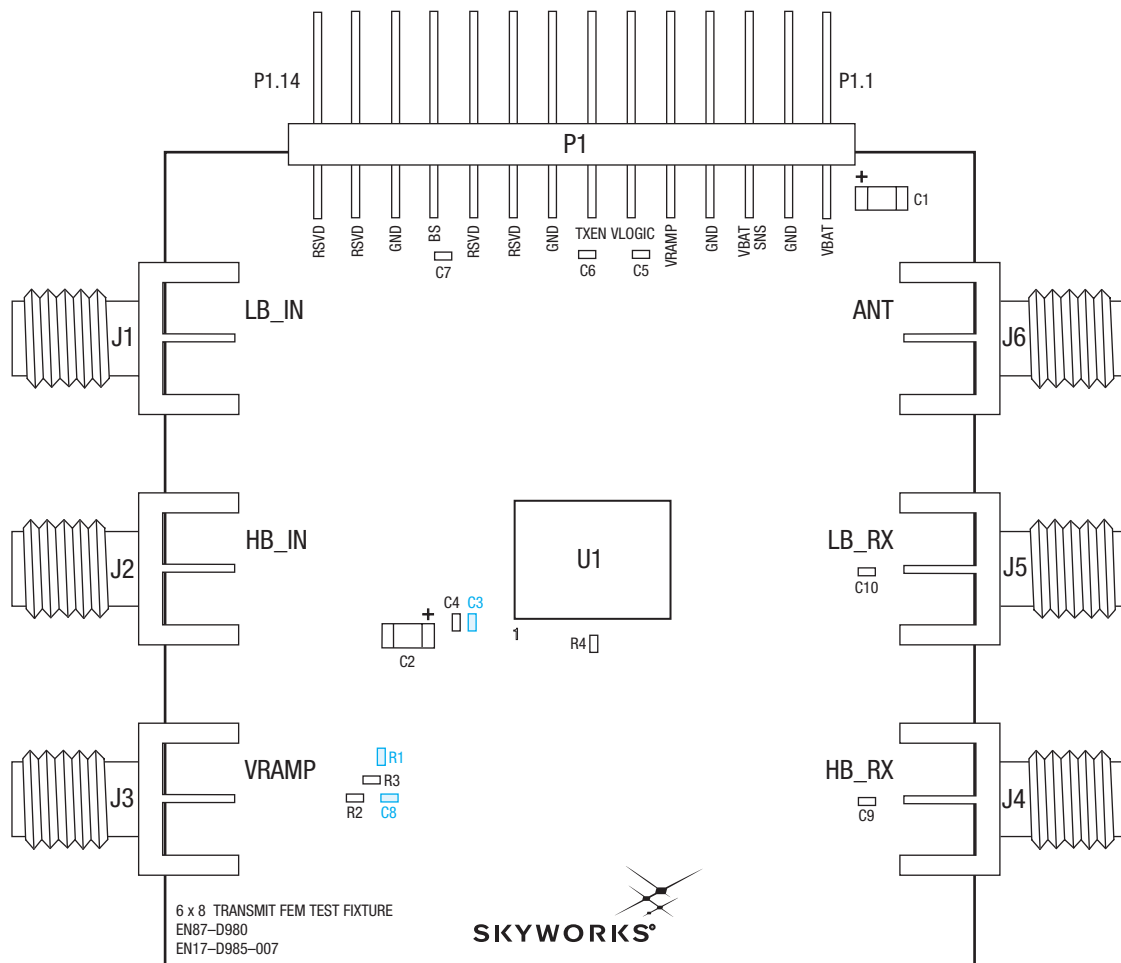
APPLICATION NOTE

SKY77517 / SKY77518 FEM EVALUATION BOARD INFORMATION

INTRODUCTION

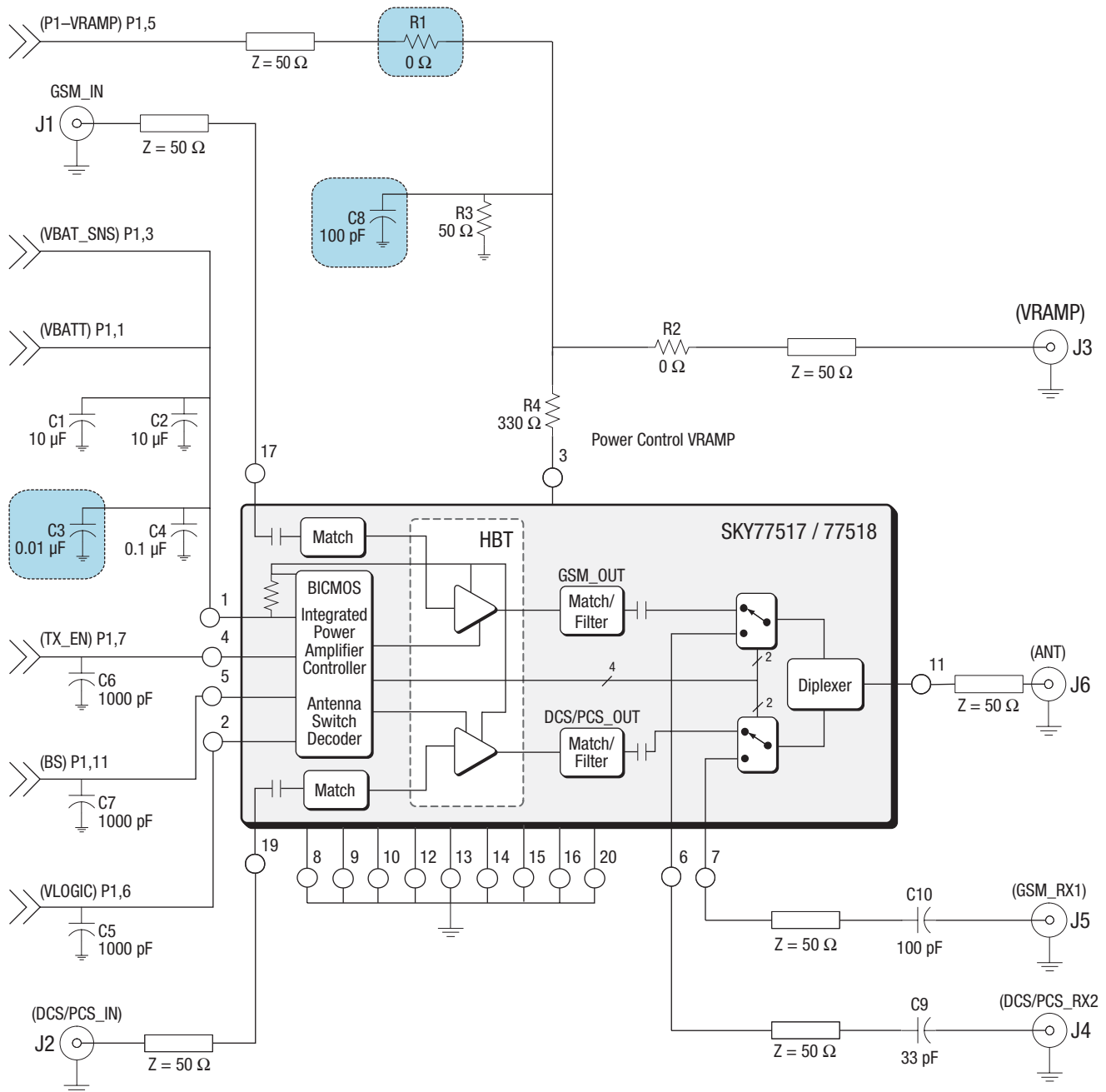
The information in this Application Note is intended to assist users of the SKY77517 / SKY77518 Evaluation Board (EN18-D980-007, Rev. A) with board design, board layout, interface connector designations, adding components not currently installed, and troubleshooting purposes.

The evaluation board assembly drawing in [Figure 1](#) shows the placement of board components and their designations. The circuit schematic of the evaluation board in [Figure 2](#) illustrates the interconnections and board components in relation to the SKY77517 / SKY77518 Front-End Modules. Where appropriate, components not actually installed on the latest board revision are highlighted on the evaluation board drawing, the circuit schematic, and in the component bill of material. Such components are often included in the initial board design to provide maximum test flexibility. See [Table 1](#) for the interface connector pad numbering convention and the pad signal descriptions. [Table 2](#) lists the bill of material with the component descriptions and value ratings. Finally, the individual board layers are shown in [Figure 3](#) through [Figure 6](#).



200574_001

Figure 1. SKY77517 / SKY77518 Evaluation Board



NOTE: Components in **dashed boxes** are not installed on latest BOM revision. See NOTES in Table 2.

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Figure 2. SKY77517/ SKY77518 Evaluation Board Schematic

Table 1. P1 SIGNAL DEFINITIONS

CONNECTOR (P1) PAD	SIGNAL	CONNECTOR (P1) PAD	SIGNAL
P1.1	VBATT	P1.8	GND
P1.2	GND	P1.9	RSVD
P1.3	VBAT_SNS	P1.10	RSVD
P1.4	GND	P1.11	BS
P1.5	VRAMP	P1.12	GND
P1.6	VLOGIC	P1.13	RSVD
P1.7	TXEN	P1.14	RSVD

Table 2. SKY77517 / SKY77518 EVALUATION BOARD BILL OF MATERIAL ¹

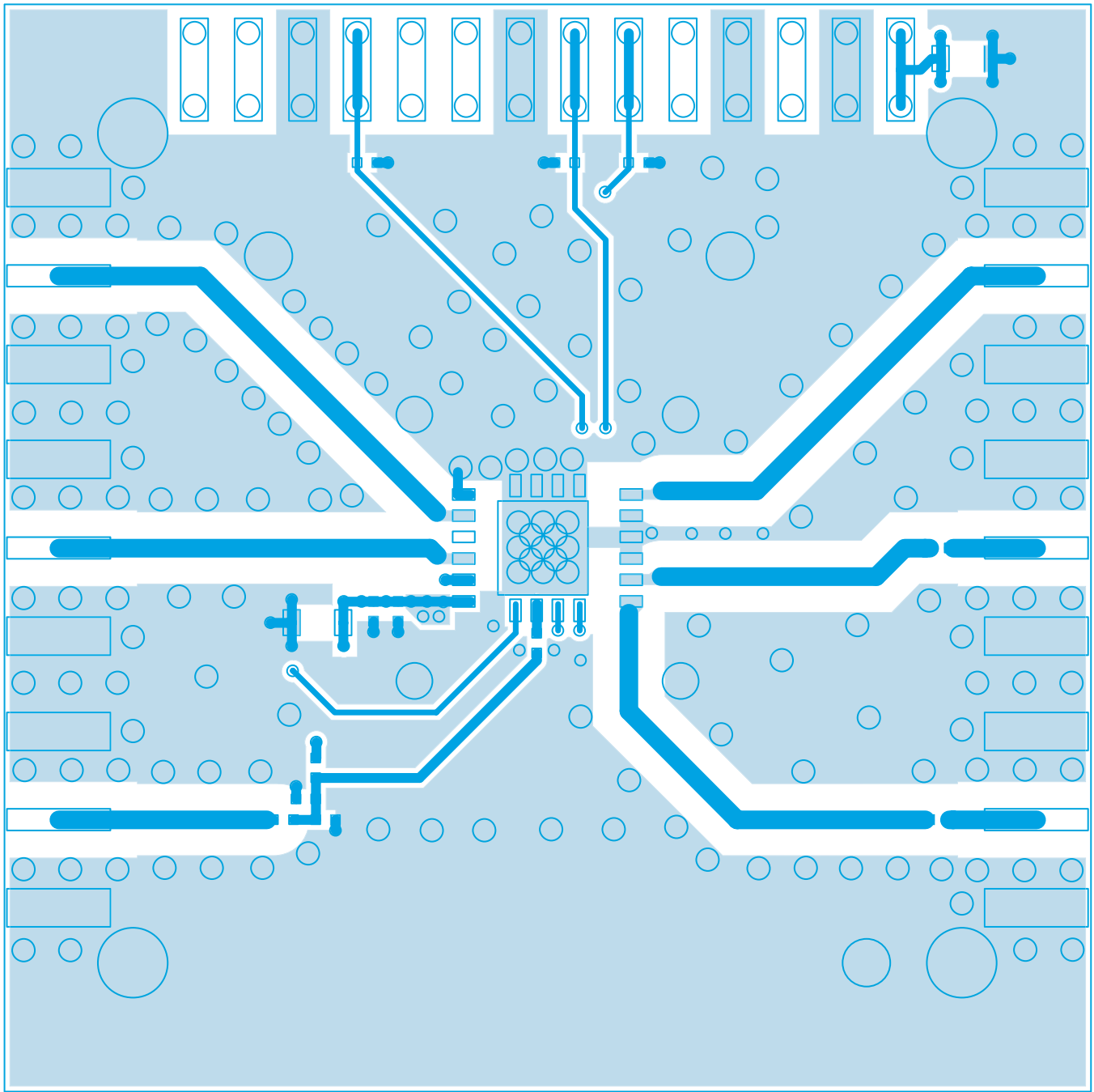
COMPONENT DESIGNATOR	DESCRIPTION
J1, J2, J3, J4, J5, J6	CONN SMA END LAUNCH JACK TAB CONTACT GOLD 0.062 »
P1	CONNECTOR, 14-PIN, POST LENGTH = 0.53 »
C1, C2	CAPACITOR, TANTALUM, MOLDED, 10 µF, 16 V, ±10%, B CASE SIZE
C3	CAPACITOR, CERAMIC, 10000 pF, X7R, 16 V, ±10%, 0402
C4	CAPACITOR, CERAMIC, 0.1 µF, X5R, 6.3 V, ±10%, 0402
C5, C6, C7	CAPACITOR, CERAMIC, 1000 pF, X7R, 25 V, ±10%, 0402
C8	CAPACITOR, CERAMIC, 100 pF, COG 50 V, ±10%, 0402
C9	CAPACITOR, CERAMIC, 68 pF, COG, 50 V, ±10%, 0402
C10	CAPACITOR, CERAMIC, 120 pF, COG, 50 V, ±10%, 0402
R1, R2	RESISTOR, PB FREE, 0402, 1000 OHMS, 50 V, 0.063 W, ±5%
R3	RESISTOR, 0402, 51 OHMS, FIXED, SMT, 50 V, 0.063 W, ±5%
R5, R6	RESISTOR, 0402, ZERO OHMS, 0.063 W, 0402, 100% TIN PLATED

¹ **R1, C3, C8:** THESE COMPONENTS ARE NOT INSTALLED ON THE LATEST BOM REVISION.

R3: REMOVE THIS COMPONENT IF A HIGH IMPEDANCE TERMINATION IS DESIRED FOR THE DEVICE VRAMP INPUT. ALSO, CHANGE R1 TO ZERO OHMS (IF SIGNAL INPUT AT VRAMP P1.5) OR R2 TO ZERO OHMS (IF SIGNAL INPUT AT APC J1).

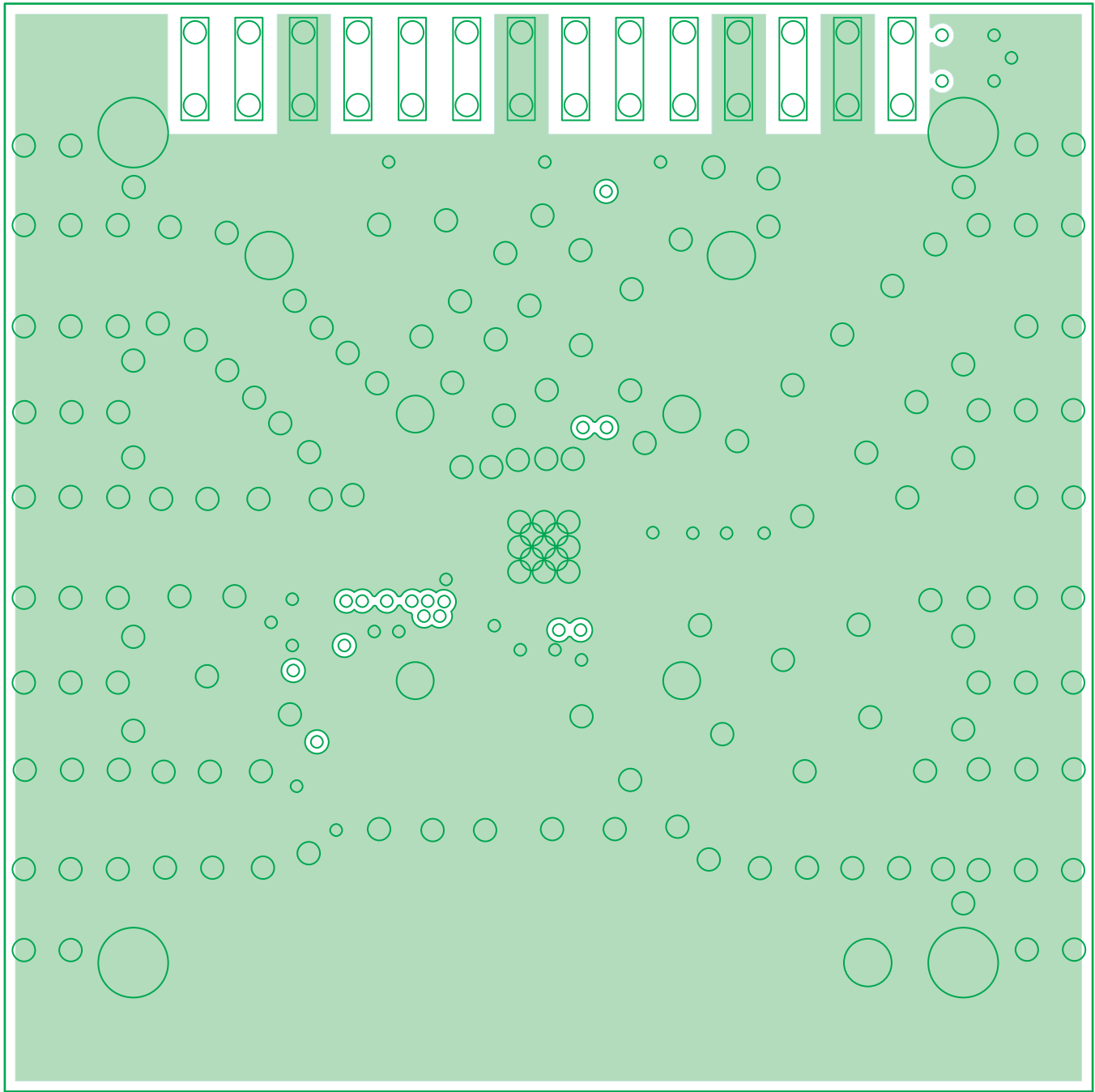
C3: INSTALL THIS COMPONENT IF ADDITIONAL FILTERING IS DESIRED ON VBATT.

C8: INSTALL THIS COMPONENT IF EXTERNAL RC FILTERING IS DESIRED. THIS WILL REQUIRE NON-ZERO VALUES FOR R1 AND R2. THE CORNER FREQUENCY OF THE RC FILTER WILL BE DETERMINED BY 1/RC. R3 SHOULD BE REMOVED IF EXTERNAL FILTERING IS USED.



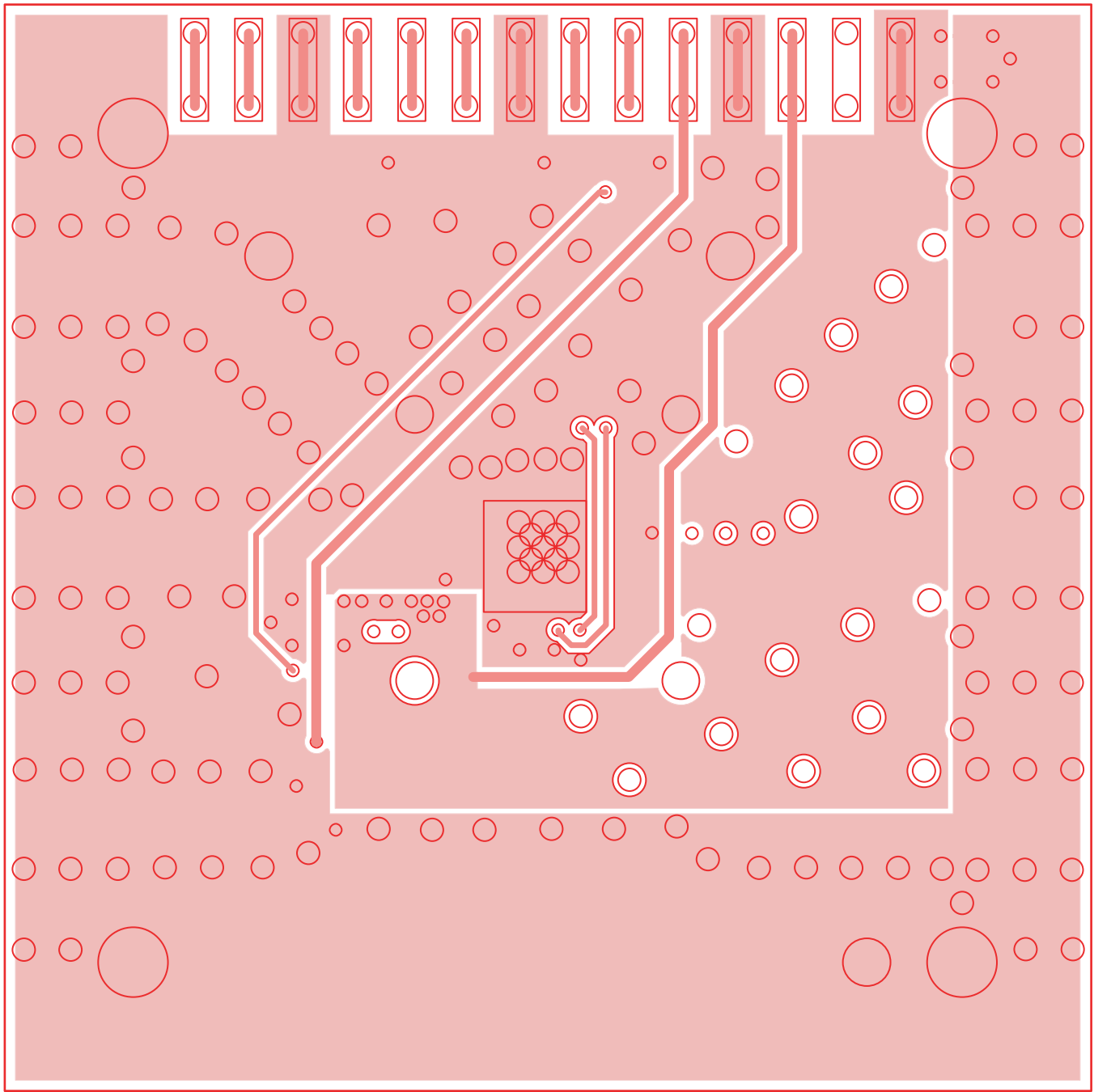
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Figure 3. SKY77517 / SKY77518 Evaluation Board Layer 1



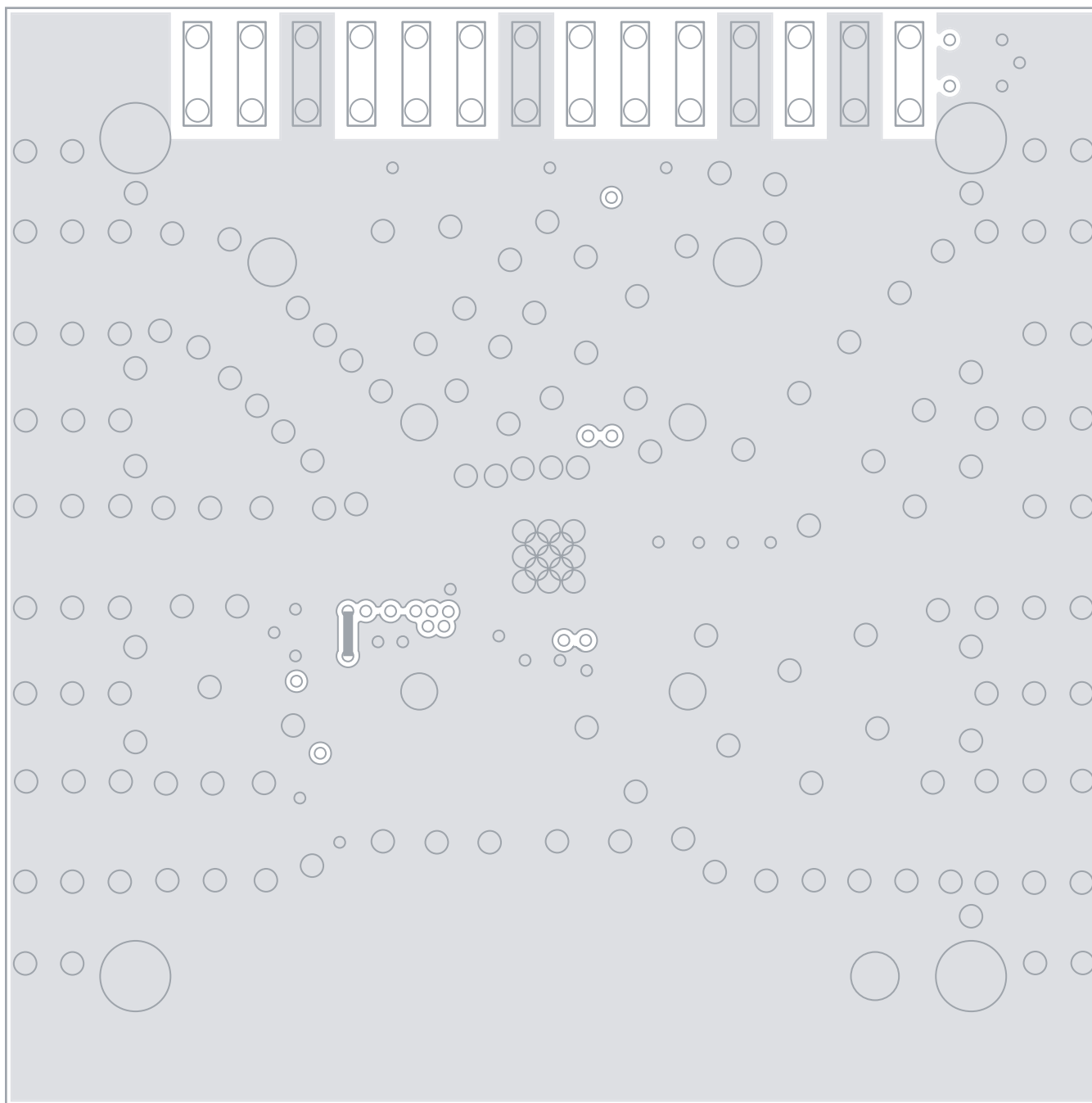
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Figure 4. SKY77517 / SKY77518 Evaluation Board Layer 2



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Figure 5. SKY77517 / SKY77518 Evaluation Board Layer 3



200574_006

Figure 6. SKY77517 / SKY77518 Evaluation Board Layer 4

Ordering Information

Model Number	Manufacturing Part Number	Package	Operating Temperature
SKY77517 / 77518 Evaluation Board	EN18-D980-007, Rev. A		–25 °C to +100 °C

Revision History

Revision	Date	Description
A	August 11, 2006	Initial Release
B	May 28, 2009	Revise: Title (added FEM); Introduction (added SKY77517, corrected part name); Figure 1 caption

References

Skyworks Data Sheet: SKY77517, Document Number 200494

Skyworks Data Sheet: SKY77518, Document Number 200472

Skyworks Application Note: SKY77518 BiCMOS iPAC™ Front-End Implementation, Document Number 200576

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