

## TEST REPORT

FOR: Quiet Solution, LLC  
Sunnyvale, CA

Sound Transmission Loss Test  
RAL™-TL07-026

ON: ID 15: QuietRock 528 (QR 528), 24" on Center Steel  
Stud Wall with R-13 Fiberglass and QuietRock 528 (QR  
528)

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CONDUCTED: 24 January 2007

### TEST METHOD

Unless otherwise designated, the measurements reported below were made with all facilities and procedures in explicit conformity with the ASTM Designations E90-04 and E413-04, as well as other pertinent standards. Riverbank Acoustical Laboratories has been accredited by the U.S. Department of Commerce, National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP) for this test procedure (NVLAP Lab Code: 100227-0). A description of the measuring technique is available separately.

### DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the client as ID 15: QuietRock 528 (QR 528), 24" on center steel stud wall with R-13 fiberglass and QuietRock 528 (QR 528). The overall dimensions of the specimen as measured were nominally 2.46 m (97 in.) wide by 2.74 m (108 in.) high and 124 mm (4.875 in.) thick. The specimen was installed by the client directly into the laboratory's 2.74 m (9 ft) by 4.27 m (14 ft) wood-lined steel frame. A substantial filler wall was used in the remaining open area. Both the filler wall and test specimen were sealed on the periphery (both sides) with dense mastic.

The description of the specimen was as follows: The wall consisted of 25 gauge steel framing with R-13 fiberglass batt insulation. Both sides of the wall were finished with QuietRock QR 528. A more detailed description of the wall assembly appears in the sections below.

Track, Studs and Insulation: Two 92 mm (3.625 in.) wide 25 gauge 2.74 m (108 in.) long steel runners were attached to the floor and ceiling with 32 mm (1.25 in.) Type S screws 610 mm (24 in.) on centers. Five (5) 92 mm (3.625 in.) wide 25 gauge 2.73 m (107.5 in.) long steel studs were spaced on 610 mm (24 in.) centers. The end studs were attached to the frame with 32 mm (1.25 in.) long screws spaced on 610 mm (24 in.) centers. All cavities formed by the track and studs were filled with faced R-13 fiberglass insulation measuring 89 mm (3.5 in.) thick. The total weight of the insulation was 9.3 kg (20.5 lbs).

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Gypsum Wallboard: On both sides, a layer of 16 mm (0.625 in.) thick QR 528 board was applied vertically to the studs. The boards were attached to the studs with #6, 32 mm (1.25 in.) long bugle head drywall screws at 406 mm (16 in.) on centers. Total weight of the board as measured was 207.5 kg (457.5 lbs.). Joints were sealed with QuietSeal 350 (QS 350) acoustical caulk and metal taped. Screw heads remained exposed.

The weight of the specimen as measured was 227 kg (499.5 lbs.), an average of 33.5 kg/m<sup>2</sup> (6.9 lbs/ft<sup>2</sup>). The transmission area used in the calculations was 6.7 m<sup>2</sup> (72.5 ft<sup>2</sup>). The source and receiving room temperatures at the time of the test were 20±2°C (68±2°F) and 51±2% relative humidity. The source and receive reverberation room volumes were 178 m<sup>3</sup> (6,298 ft<sup>3</sup>) and 177 m<sup>3</sup> (6,255 ft<sup>3</sup>), respectively.

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NVLAP Lab Code 100227-0

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### TEST RESULTS

Sound transmission loss values are tabulated at the eighteen standard frequencies. A graphic presentation of the data and additional information appear on the following pages. The precision of the TL test data is within the limits set by the ASTM Standard E90-04.

<u>FREQ.</u>	<u>T.L.</u>	<u>C.L.</u>	<u>DEF.</u>	<u>FREQ.</u>	<u>T.L.</u>	<u>C.L.</u>	<u>DEF.</u>
100	25	0.96		800	60	0.14	
125	38	0.50	4	1000	60	0.11	1
160	43	0.42	2	1250	61	0.12	1
200	44	0.54	4	1600	61	0.09	1
250	48	0.39	3	2000	62	0.07	
315	52	0.38	2	2500	63	0.06	
400	55	0.24	2	3150	63	0.06	
500	58	0.14		4000	61	0.07	1
630	59	0.19		5000	63	0.05	

STC=58

### ABBREVIATION INDEX

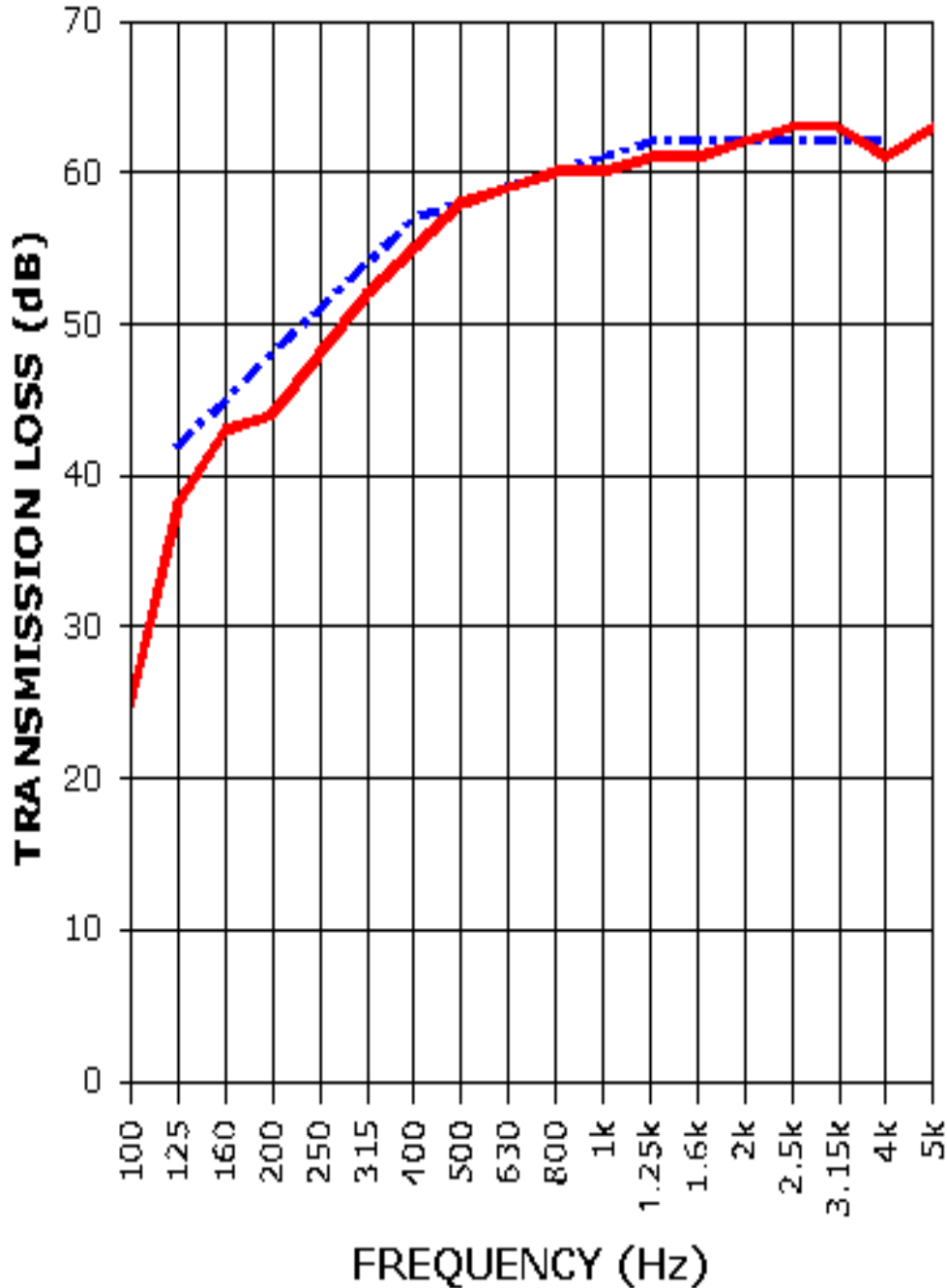
FREQ. = FREQUENCY, HERTZ, (cps)  
T.L. = TRANSMISSION LOSS, dB  
C.L. = UNCERTAINTY IN dB, FOR A 95% CONFIDENCE LIMIT  
DEF. = DEFICIENCIES, dB<STC CONTOUR (SUM OF DEF = 21)  
STC = SOUND TRANSMISSION CLASS

Tested by Marc Sciaky Approved by David L. Moyer  
Marc Sciaky David L. Moyer  
Experimentalist Laboratory Manager

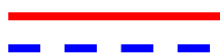
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**TEST REPORT**

**SOUND TRANSMISSION REPORT  
RAL - TL07-026**



STC= 58



TRANSMISSION LOSS  
SOUND TRANSMISSION LOSS CONTOUR

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