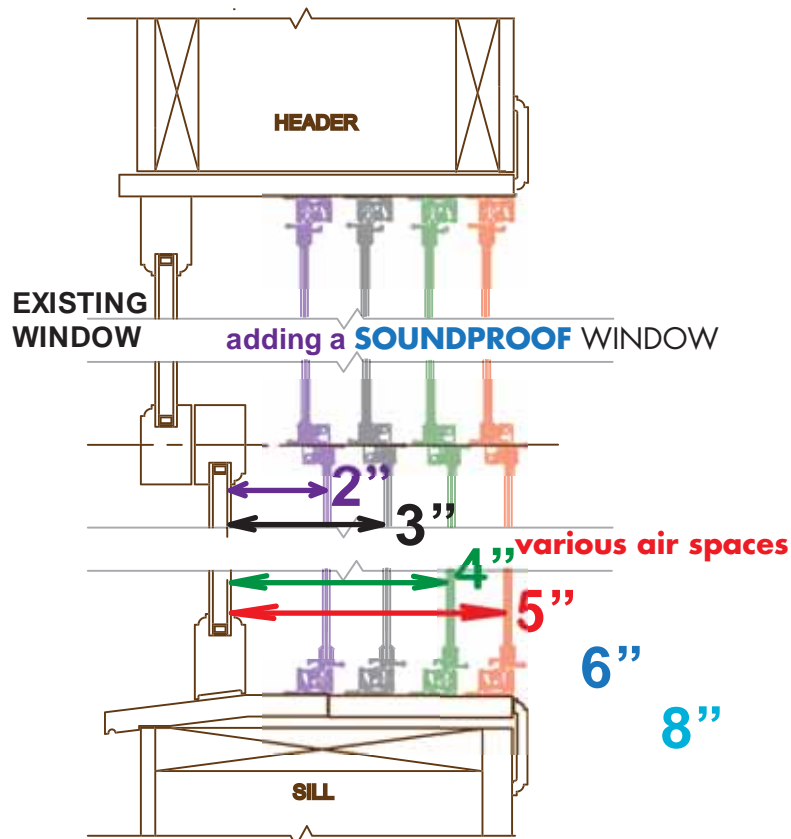




**SOUNDPROOF<sup>®</sup>**  
WINDOWS, INC.

## STC Test Results at various air spaces



### A Soundproof Window tested behind these windows:

(Using our standard 1/4" laminated glass in our 1.2" deep frame)

- Vinyl Window dual pane 1/8" over 1/8" glass
- Vinyl Window dual pane 1/8" over 3/16" glass
- Vinyl Window dual pane 1/8" over 1/4" glass
- 1/8" single pane glass
- 1/4" single pane glass

### A Soundproof Window tested behind:

(Using 5/8" laminated glass)

- Vinyl Window dual pane 1/8" over 1/8" glass
- 1/4" single pane glass
- 1/4" over 1/4" IGU (dual pane)



We have created this brochure for your use as an acoustical reference. If you have window configurations not shown here, please contact us - we likely have tested that configuration and will provide you with the additional information. We want to be your resource for glass products and steel swing doors. We also have a recording studio line of windows and doors achieving results starting at STC 64.

**We want you to use us as a reference source.** Please call us anytime to discuss these tests, your applications, or any topics we may be able to assist you with. We want a free exchange of information and a long term relationship with acoustical professionals, architects and recording studio professionals.

**CAUTION about using these test results:**

Over the years we have run hundreds of lab tests. We have modified our seals and frames substantially to improve our windows. We have improved our test results between 5 and 10 STC points as a result of these enhancements. Expect to get these improved results in the field, but do not expect to get these results by using other window brands that simply use the same types of glass we use in our windows.

**The Soundproof Windows tested:**

We used our standard windows for all of these tests. We did not alter our windows in any way to improve our results. The windows we tested are the same style, design and makeup you will get purchasing our windows today.

**The "existing" or primary windows used in our tests:**

The non-Soundproof Window units tested were standard, unmodified window or glass test units representing typical windows found in the field. We tested each of them by themselves so we have a valid, comparable reference point for testing the combinations utilizing our Soundproof Windows.

**All tests were performed by Western Electro-Acoustic Laboratory (WEAL), a fully accredited NVLAP testing laboratory located in Santa Clarita, California.**

**Glossary:**

1/4" lami glass	Industry standard laminated glass with .030 PVB interlayer. Total thickness .250".
5/8" lami glass	Laminated glass specially made for Soundproof Windows, Inc. using 3/8" and 1/4" glass sandwiched with .030" PVB interlayer. Total thickness .650".
AS	Air Space - measured glass to glass air gaps between two glass surfaces.
Dual Pane	A sealed glass configuration using two pieces of glass separated by a sealed air space. Also called double pane or IGU (Insulated Glass Unit).
Frames	Our "standard" window frame is 1.2" deep (front to back) and can accommodate sliding/operable windows using 1/4" laminated glass <u>or</u> a single removable or fixed 5/8" laminated glass.
HF	Heavy Frame - A window/door using our 2.75" deep frame with heavy duty rollers and capacity to use 1/4" or 5/8" laminated glass.
IGU	Insulated Glass Unit - see Dual Pane definition.
Milgard	The vinyl test window made by Milgard. It is a standard <i>Style Line Series</i> Milgard window with a 3/4" overall thickness IGU. We used three different windows with three different glass configurations. The tested STC ratings were less than the manufacturer's published STC ratings.
SPW	Refers to a window manufactured by Soundproof Windows, Inc.
SPW250	A SPW using 1/4" laminated glass
SPW400	A SPW using 3/8" laminated glass
SPW650	A SPW using 5/8" laminated glass
STC Curve	We have inserted the STC curve in our graphs at various STC levels as a reference point for reading the graphs.
X	A one glass panel window - removable.

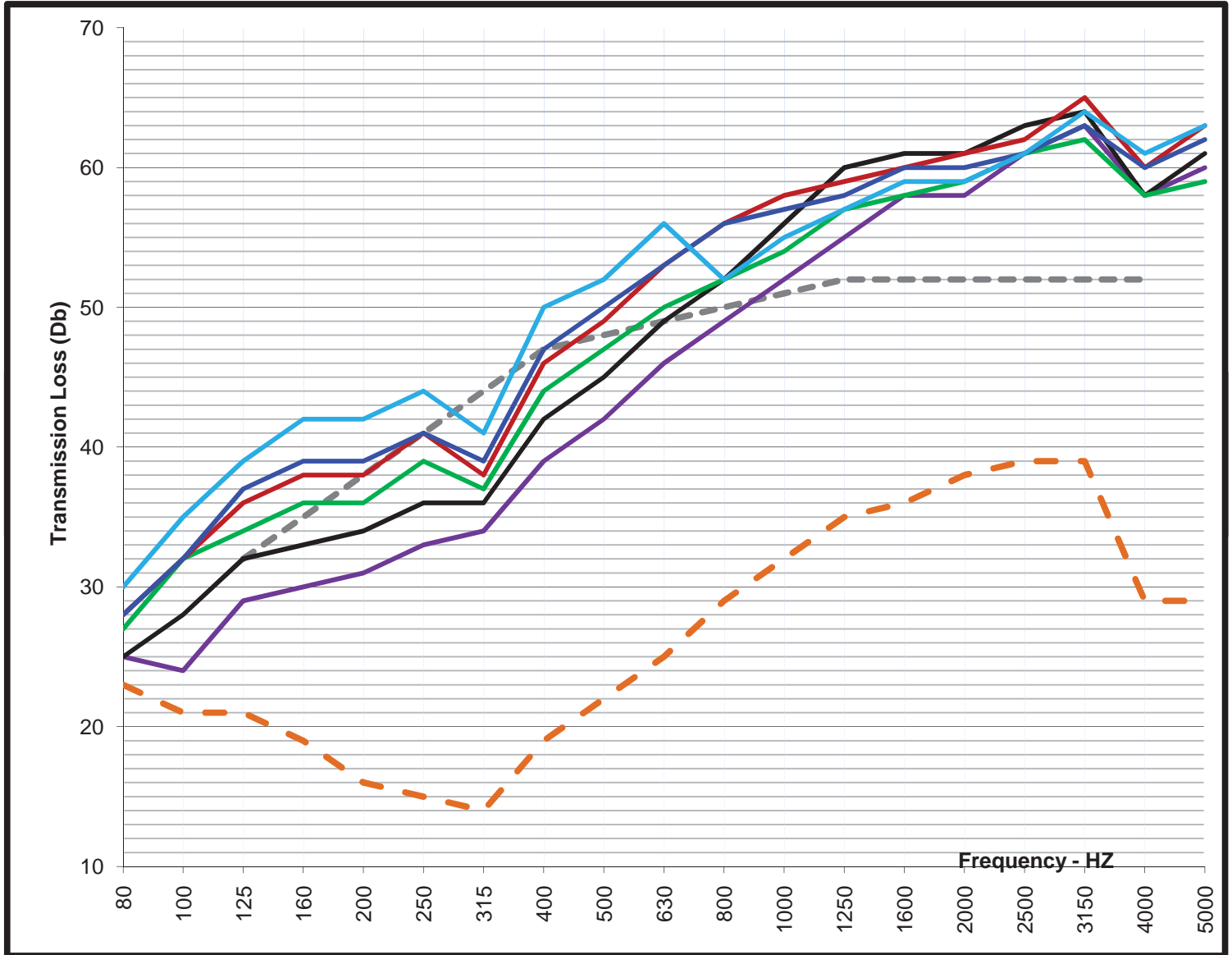
# STC Lab Test Results

A Soundproof Window installed behind a:

## Dual Pane 1/8" over 1/8"

Tested at various air spacing between the test window and a Soundproof Window

Results: **26** STC Test Window - STC Test Result Range: **45** to **53**



	1/3 Octave Band (HZ)	STC	OITC	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	Test Rpt Number	
---	STC CURVE	48				32	35	38	41	44	47	48	49	50	51	52	52	52	52	52	52	52		
- - -	Vinyl 1/8+1/8 dual	26	21	23	21	21	19	16	15	14	19	22	25	29	32	35	36	38	39	39	29	29		TL08-261
—	Add SPW w/2" AS	45	36	25	24	29	30	31	33	34	39	42	46	49	52	55	58	58	61	63	58	60		TL08-300
—	Add SPW w/3" AS	48	38	25	28	32	33	34	36	36	42	45	49	52	56	60	61	61	63	64	58	61		TL08-265
—	Add SPW w/4" AS	49	41	27	32	34	36	36	39	37	44	47	50	52	54	57	58	59	61	62	58	59		TL08-301
—	Add SPW w/5" AS	50	42	28	32	36	38	38	41	38	46	49	53	56	58	59	60	61	62	65	60	63		TL08-266
—	Add SPW w/6" AS	51	43	28	32	37	39	39	41	39	47	50	53	56	57	58	60	60	61	63	60	62		TL08-267
—	Add SPW w/8" AS	53	45	30	35	39	42	42	44	41	50	52	56	52	55	57	59	59	61	64	61	63		TL08-268

AS=Air Space SPW=Soundproof Window Test window is a Milgard Vinyl 3/4" IGU Style Line Series window

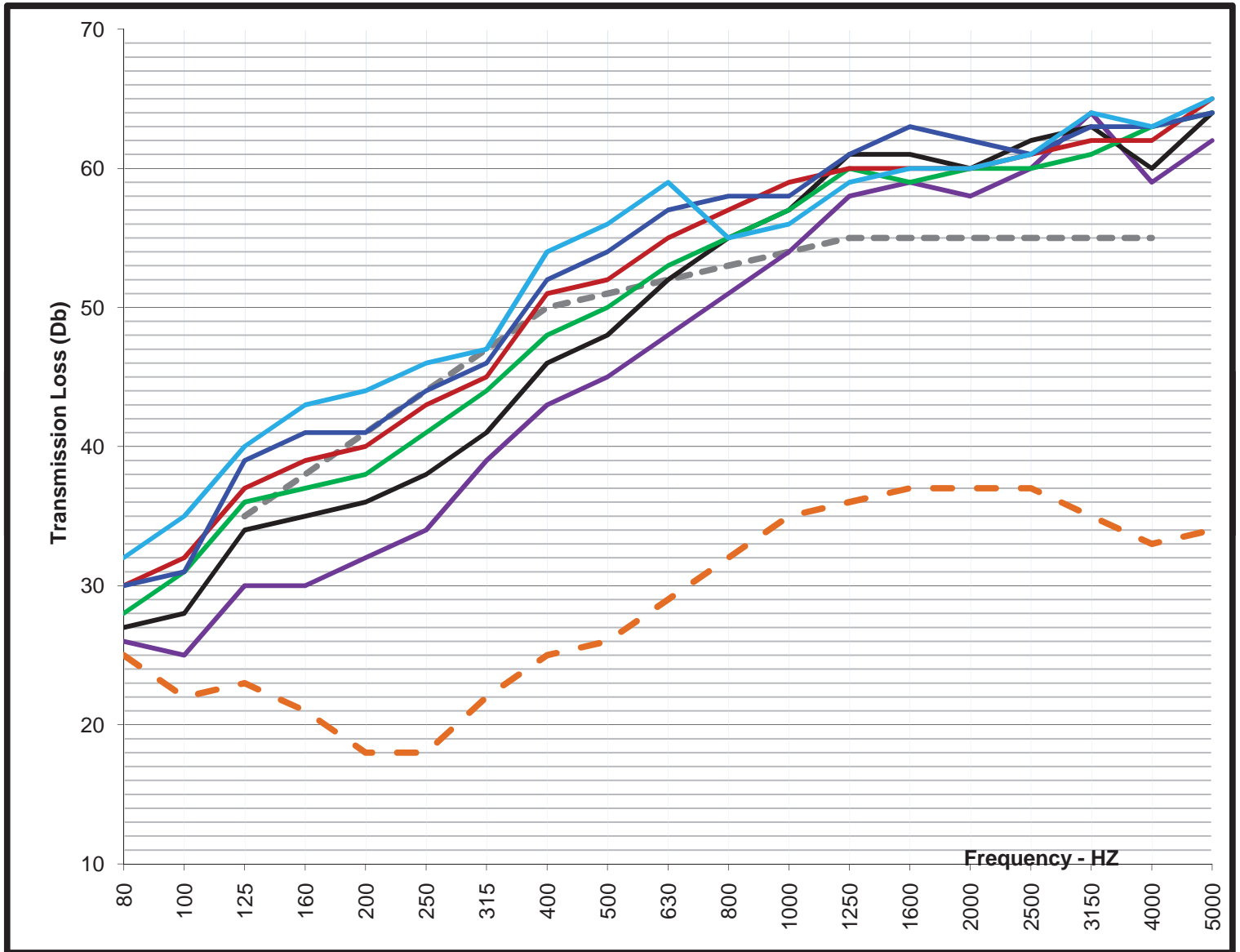
# STC Lab Test Results

A Soundproof Window installed behind a:

## Dual Pane 1/8" over 3/16"

Tested at various air spacing between the test window and a Soundproof Window

Results: **31** STC Test Window - STC Test Result Range: **47** to **57**



	STC	OITC	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	Test Rpt Number
----- STC CURVE	48				32	35	38	41	44	47	51	49	50	51	52	52	52	52	52	52	52	
- - - - Vinyl 1/8+3/16 dual	31	26	25	22	23	21	18	18	22	25	26	29	32	35	36	37	37	37	35	33	34	TL08-269
----- Add SPW w/2" AS	47	37	26	25	30	30	32	34	39	43	45	48	51	54	58	59	58	60	64	59	62	TL08-270
----- Add SPW w/3" AS	51	40	27	28	34	35	36	38	41	46	48	52	55	57	61	61	60	62	63	60	64	TL08-272
----- Add SPW w/4" AS	53	42	28	31	36	37	38	41	44	48	50	53	55	57	60	59	60	60	61	63	64	TL08-271
----- Add SPW w/5" AS	55	44	30	32	37	39	40	43	45	51	52	55	57	59	60	60	60	61	62	62	65	TL08-273
----- Add SPW w/6" AS	56	44	30	31	39	41	41	44	46	52	54	57	58	58	61	63	62	61	63	63	64	TL08-274
----- Add SPW w/8" AS	57	46	32	35	40	43	44	46	47	54	56	59	55	56	59	60	60	61	64	63	65	TL08-275

AS=Air Space SPW=Soundproof Window Test window is a Milgard Vinyl 3/4" IGU Style Line Series window

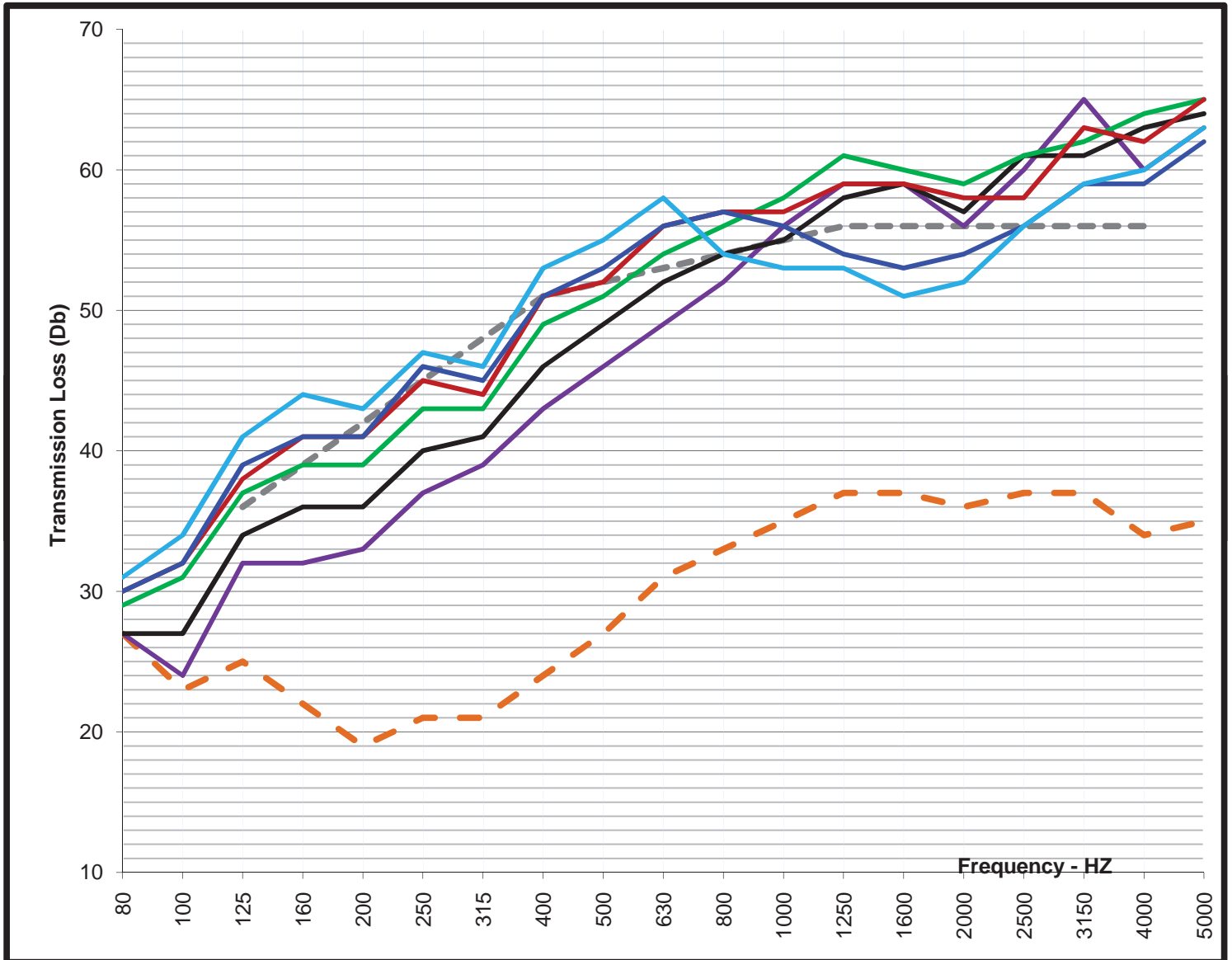
# STC Lab Test Results

A Soundproof Window installed behind a:

## Dual Pane 1/8" over 1/4"

Tested at various air spacing between the test window and a Soundproof Window

Results: **32** STC Test Window - STC Test Result Range: **49** to **55**



	STC	OITC	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	Test Rpt Number
--- STC CURVE	52				36	39	42	45	48	51	52	53	54	55	56	56	56	56	56	56	56	
- - - Vinyl 1/8+1/4 dual	32	26	27	23	25	22	19	21	21	24	27	31	33	35	37	37	36	37	37	34	35	TL08-254
— Add SPW w/2" AS	49	38	27	24	32	32	33	37	39	43	46	49	52	56	59	59	56	60	65	60	63	TL08-260
— Add SPW w/3" AS	52	40	27	27	34	36	36	40	41	46	49	52	54	55	58	59	57	61	61	63	64	TL08-253
— Add SPW w/4" AS	54	43	29	31	37	39	39	43	43	49	51	54	56	58	61	60	59	61	62	64	65	TL08-259
— Add SPW w/5" AS	55	44	30	32	38	41	41	45	44	51	52	56	57	57	59	59	58	58	63	62	65	TL08-255
— Add SPW w/6" AS	54	44	30	32	39	41	41	46	45	51	53	56	57	56	54	53	54	56	59	59	62	TL08-256
— Add SPW w/8" AS	54	46	31	34	41	44	43	47	46	53	55	58	54	53	53	51	52	56	59	60	63	TL08-257

AS=Air Space SPW=Soundproof Window Test window is a Milgard Vinyl 3/4" IGU Style Line Series window

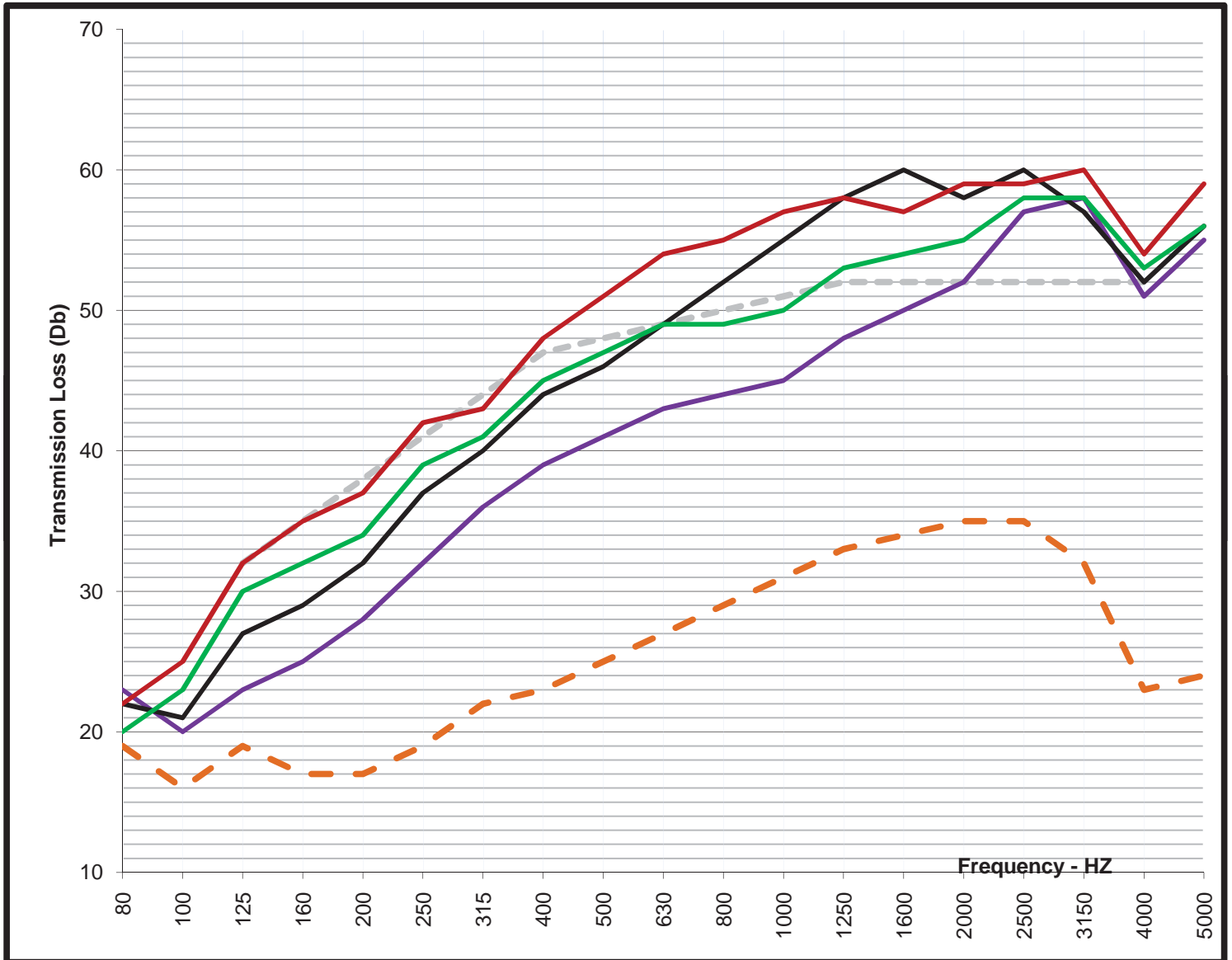
# STC Lab Test Results

A Soundproof Window installed behind:

## 1/8" single pane glass

Tested at various air spacing between the test glass and a Soundproof Window

Results: **27** STC Test Glass - STC Test Result Range: **43** to **52**



	STC	OITC	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	Test Rpt Number	
--- STC CURVE	48			32	35	38	41	44	47	48	49	50	51	52	52	52	52	52	52	52	52	52	
- - - Single 1/8" glass	27	24	19	16	19	17	17	19	22	23	25	27	29	31	33	34	35	35	32	23	24		TL08-287
— Add SPW w/2" AS	43	32	23	20	23	25	28	32	36	39	41	43	44	45	48	50	52	57	58	51	55		TL08-306
— Add SPW w/3" AS	48	34	22	21	27	29	32	37	40	44	46	49	52	55	58	60	58	60	57	52	56		TL08-288
— Add SPW w/4" AS	49	36	20	23	30	32	34	39	41	45	47	49	49	50	53	54	55	58	58	53	56		TL08-307
— Add SPW w/5" AS	52	38	22	25	32	35	37	42	43	48	51	54	55	57	58	57	59	59	60	54	59		TL08-289

AS=Air Space SPW=Soundproof Window Test glass is a 1/8" sheet of plate glass (single pane)

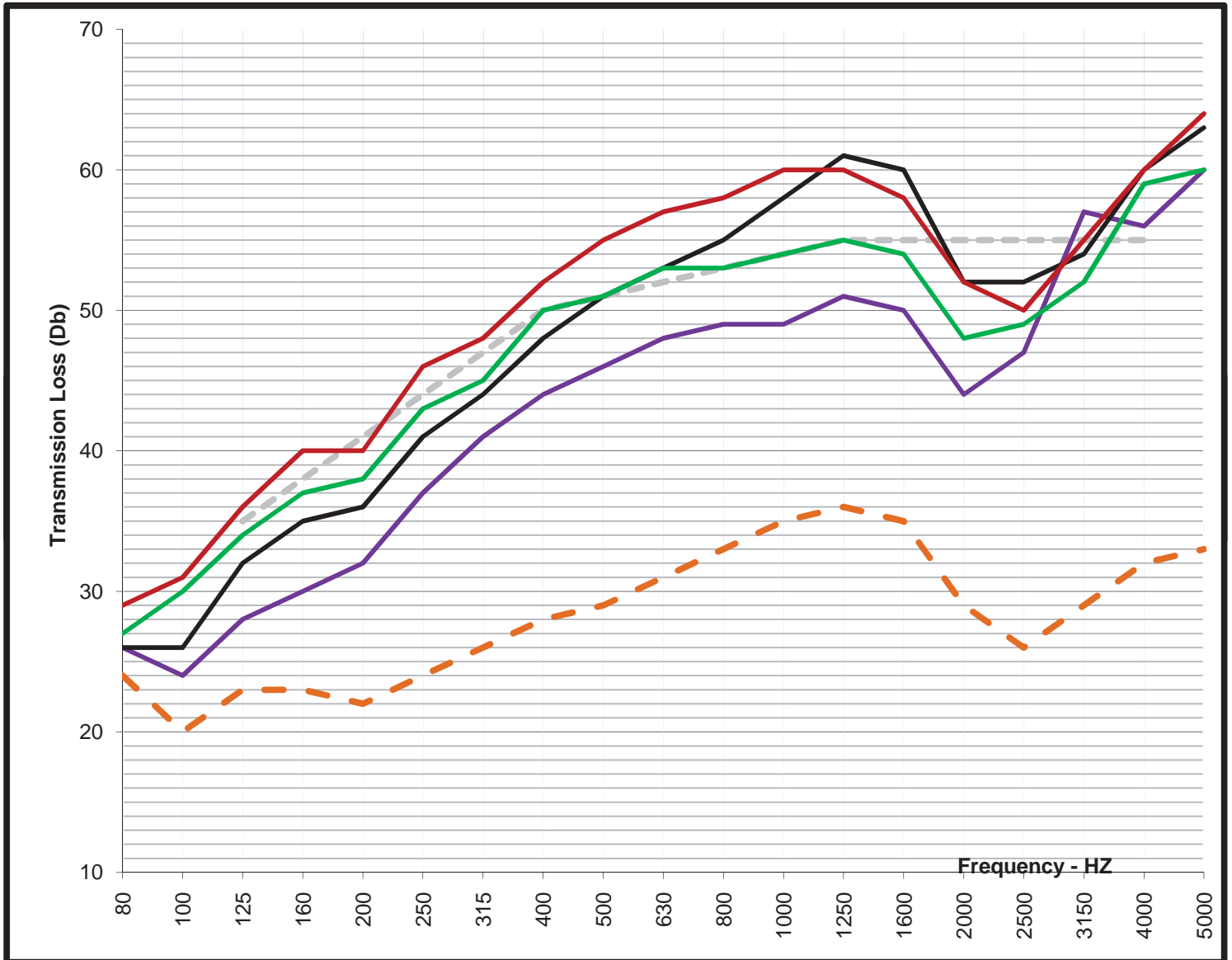
# STC Lab Test Results

A Soundproof Window installed behind:

## 1/4" single pane glass

Tested at various air spacing between the test glass and a Soundproof Window

Results: **30** STC Test Glass - STC Test Result Range: **46** to **54**



1/3 Octave Band (HZ)	STC	OITC	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	Test Rpt Number
--- STC CURVE	51			35	38	41	44	47	50	51	52	53	54	55	55	55	55	55	55	55	55	TL08-292
- - - Single 1/4" glass	30	27	24	20	23	23	22	24	26	28	29	31	33	35	36	35	29	26	29	32	33	TL08-292
— Add SPW with 2" AS	46	36	26	24	28	30	32	37	41	44	46	48	49	49	51	50	44	47	57	56	60	TL08-305
— Add SPW with 3" AS	51	39	26	26	32	35	36	41	44	48	51	53	55	58	61	60	52	52	54	60	63	TL08-291
— Add SPW with 4" AS	51	41	27	30	34	37	38	43	45	50	51	53	53	54	55	54	48	49	52	59	60	TL08-304
— Add SPW with 5" AS	54	43	29	31	36	40	40	46	48	52	55	57	58	60	60	58	52	50	55	60	64	TL08-290

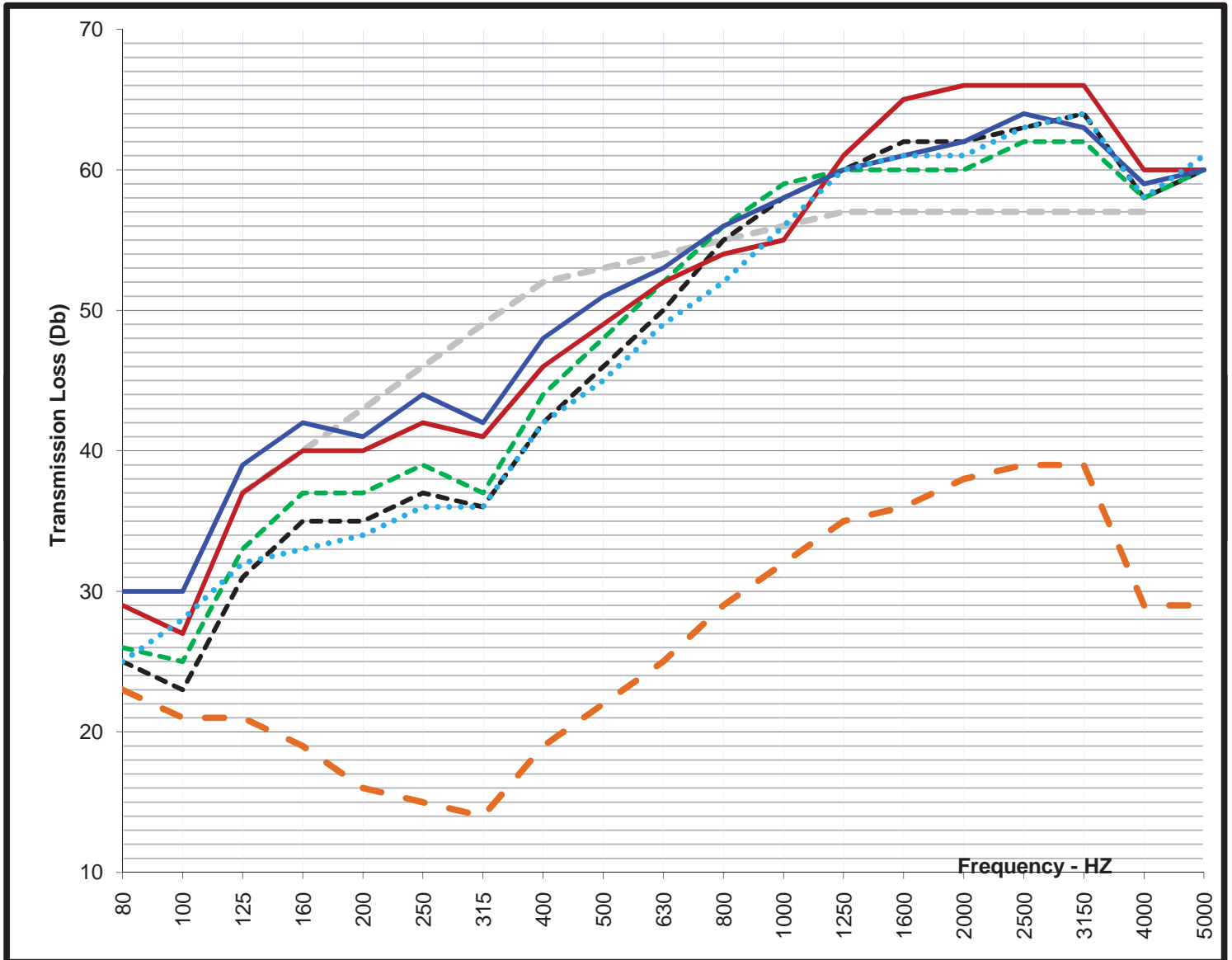
AS=Air Space SPW=Soundproof Window Test glass is a 1/4" sheet of plate glass (single pane)

# STC Lab Test Results

Various SPW Frames & Glass Thicknesses installed behind a:  
**Dual Pane 1/8" over 1/8"**

Tested at various air spacing between the test window and a Soundproof Window

Results: **26** STC Test Window - STC Test Result Range: **48** to **54**



	STC	OITC	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	Test Rpt Number
--- STC CURVE 1	53			37	40	43	46	49	52	53	54	55	56	57	57	57	57	57	57	57	57	
- - - Vinyl 1/8+1/8 dual	26	21	23	21	21	19	16	15	14	19	22	25	29	32	35	36	38	39	39	29	29	TL08-261
— HF SPW250 w/3" AS	48	37	25	23	31	35	35	37	36	42	46	50	55	58	60	62	62	63	64	58	60	TL09-291
— HF SPW250 w/4" AS	49	39	26	25	33	37	37	39	37	44	48	52	56	59	60	60	60	62	62	58	60	TL09-292
— HF SPW650 w/3" AS	53	41	29	27	37	40	40	42	41	46	49	52	54	55	61	65	66	66	66	60	60	TL09-290
— HF SPW650 w/ 4" AS	54	43	30	30	39	42	41	44	42	48	51	53	56	58	60	61	62	64	63	59	60	TL09-293
..... Stnd SPW w/3" AS	48	38	25	28	32	33	34	36	36	42	45	49	52	56	60	61	61	63	64	58	61	TL08-265

HF=Heavy Frame 2.75" deep. SPW250=1/4" lami SPW650=5/8" lami Stnd SPW=Standard 1.2" deep frame  
 Test Window: Vinyl Milgard Style Line Series with 3/4" IGU using glass configuration shown above.

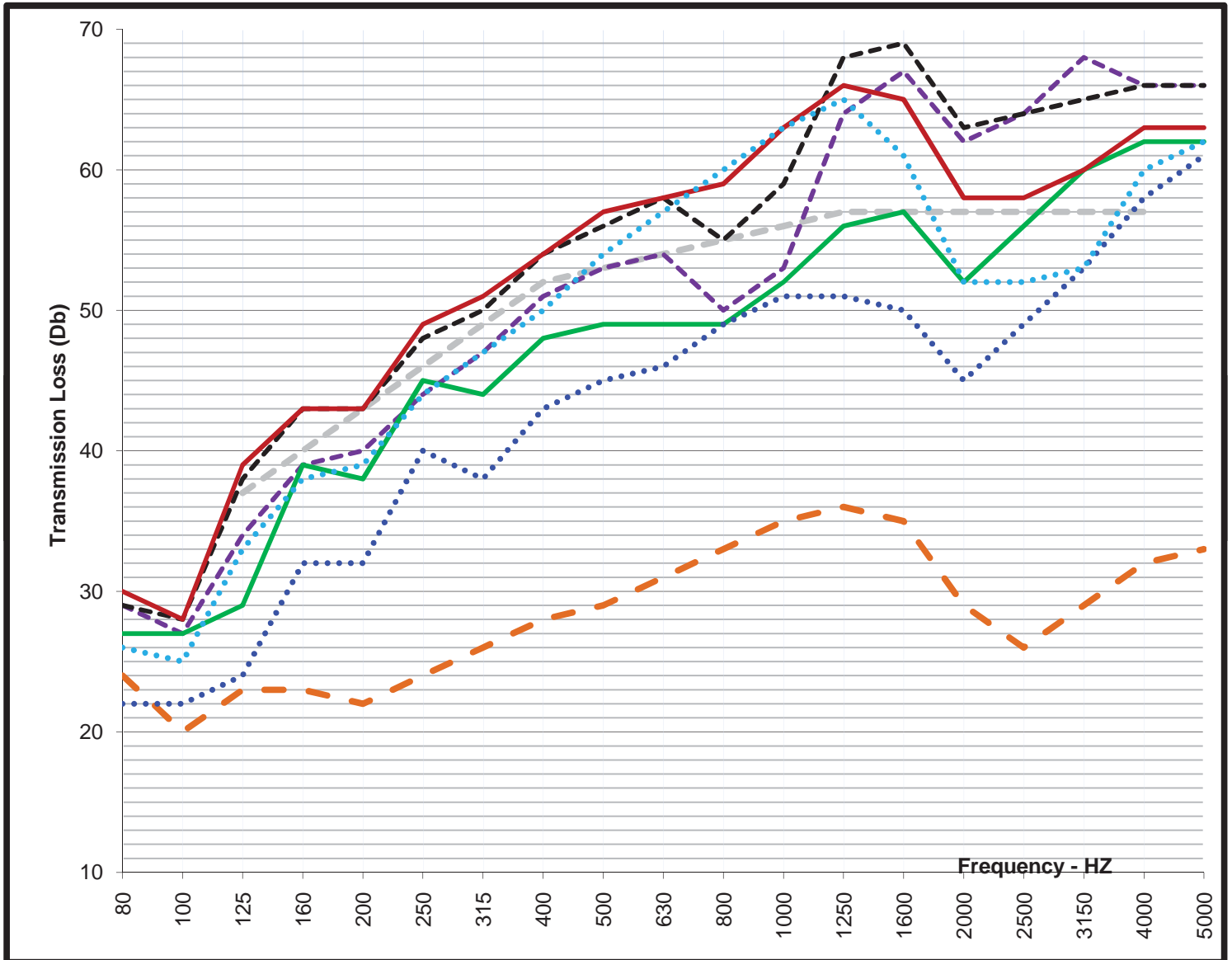


# STC Lab Test Results

Various SPW Frames & Glass Thicknesses installed behind:  
**1/4" glass**

Tested at various air spacing between the test glass and a Soundproof Window

Results: **30** STC Test Glass - STC Test Result Range: **46** to **58**



	STC	OITC	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	Test Rpt Number
--- STC CURVE 1	53			37	40	43	46	49	52	53	54	55	56	57	57	57	57	57	57	57	57	TL08-292
- - - 1/4" plate glass	30	27	24	20	23	23	22	24	26	28	29	31	33	35	36	35	29	26	29	32	33	TL08-292
- - - X SPW650 w/2" AS	54	41	29	27	34	39	40	44	47	51	53	54	50	53	64	67	62	64	68	66	66	TL09-276
- - - X SPW650 w/3" AS	58	43	29	28	38	43	43	48	50	54	56	58	55	59	68	69	63	64	65	66	66	TL09-278
- - - HF SPW650 w/2" AS	51	39	27	27	29	39	38	45	44	48	49	49	49	52	56	57	52	56	60	62	62	TL09-286
- - - HF SPW650 w/3" AS	58	43	30	28	39	43	43	49	51	54	57	58	59	63	66	65	58	58	60	63	63	TL09-285
- - - HF SPW250 w/2" AS	46	34	22	22	24	32	32	40	38	43	45	46	49	51	51	50	45	49	53	58	61	TL09-287
- - - HF SPW250 w/3" AS	53	40	26	25	33	38	39	44	47	50	54	57	60	63	65	61	52	52	53	60	62	TL09-284

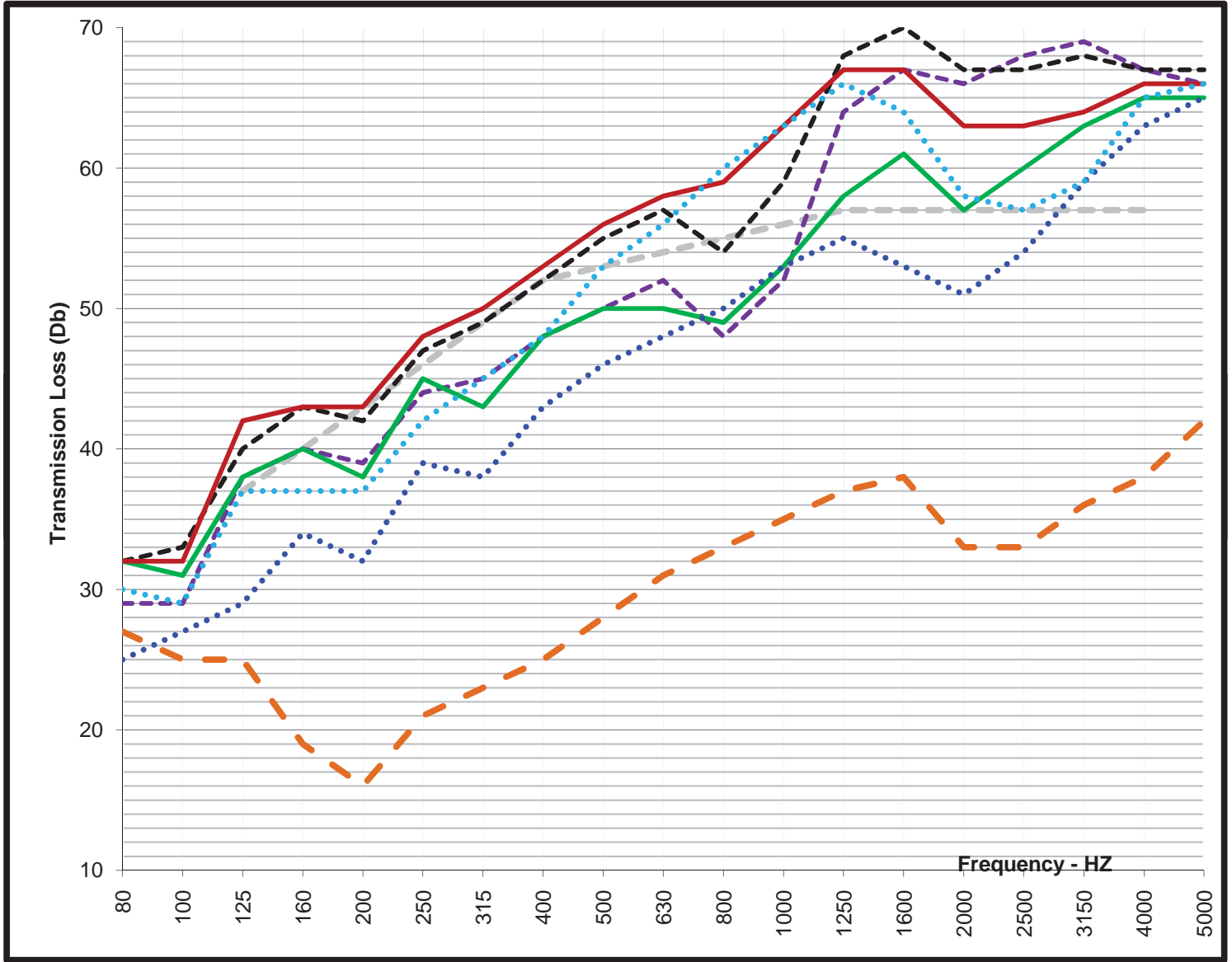
X=removable one lite HF=Heavy Frame 2.75" deep. SPW250=1/4" lami SPW650=5/8" lami

# STC Lab Test Results

Various SPW Frames & Glass Thicknesses installed behind:  
**Dual Pane 1/4" over 1/4" glass**

Tested at various air spacing between the test glass and a Soundproof Window

Results: **31** STC Test Glass - STC Test Result Range: **48** to **59**

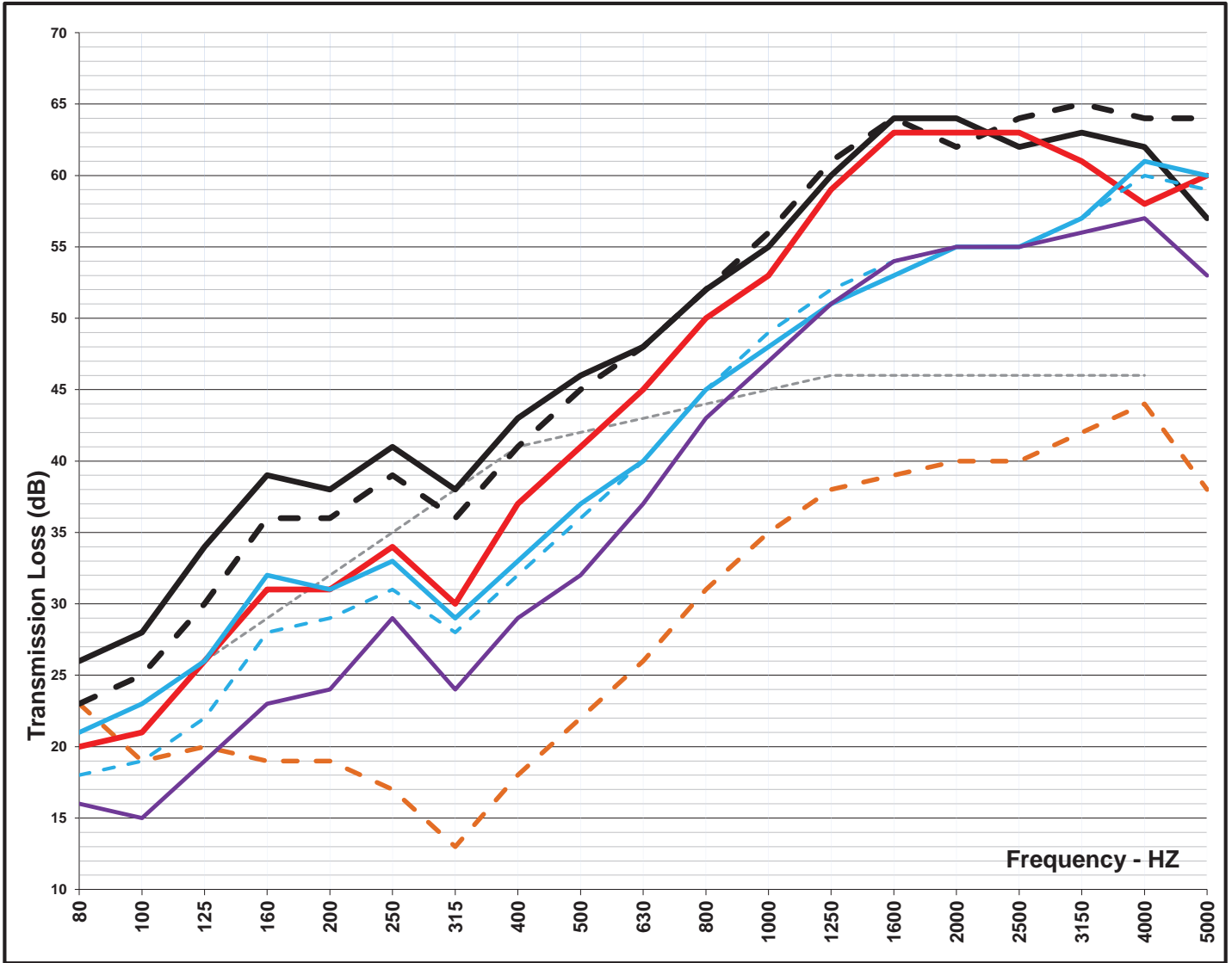


	STC	OITC	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	Test Rpt Number	
--- STC CURVE 1	53																						
- - - 1/4" over 1/4" IGU	31	26	27	25	25	19	16	21	23	25	28	31	33	35	37	38	33	33	36	38	42	TL09-280	
- - - X SPW650 w/2" AS	53	43	29	29	38	40	39	44	45	48	50	52	48	52	64	67	66	68	69	67	66	TL09-277	
- - - X SPW650 w/3" AS	57	46	32	33	40	43	42	47	49	52	55	57	54	59	68	70	67	67	68	67	67	TL09-279	
- - - HF SPW650 w/2" AS	53	44	32	31	38	40	38	45	43	48	50	50	49	53	58	61	57	60	63	65	65	TL09-289	
- - - HF SPW650 w/3" AS	59	46	32	32	42	43	43	48	50	53	56	58	59	63	67	67	63	63	64	66	66	TL09-282	
- - - HF SPW250 w/2" AS	48	38	25	27	29	34	32	39	38	43	46	48	50	53	55	53	51	54	59	63	65	TL09-288	
- - - HF SPW250 w/3" AS	54	42	30	29	37	37	37	42	45	48	53	56	60	63	66	64	58	57	59	65	66	TL09-283	

X=removable one lite HF=Heavy Frame 2.75" deep. SPW250=1/4" lami SPW650=5/8" lami

### STC Lab Test Results

## OUR COMPETITION - A COMPARISON



All tests shown are windows mounted behind an Anderson 100 Series window with 3" of air space

- Red: Quiet Window® using 3/8" acrylic
- Purple: Competitor using 1/4" acrylic
- Blue(dotted): Competitor using 1/4" laminated glass
- Blue: Competitor using 3/8" laminated glass
- Black (dotted): Soundproof Window using 1/4" laminated glass
- Black: Soundproof Window using 3/8" laminated glass

This graph shows why our tests are valid for OUR windows, but NOT for "similar" windows with identical glass.

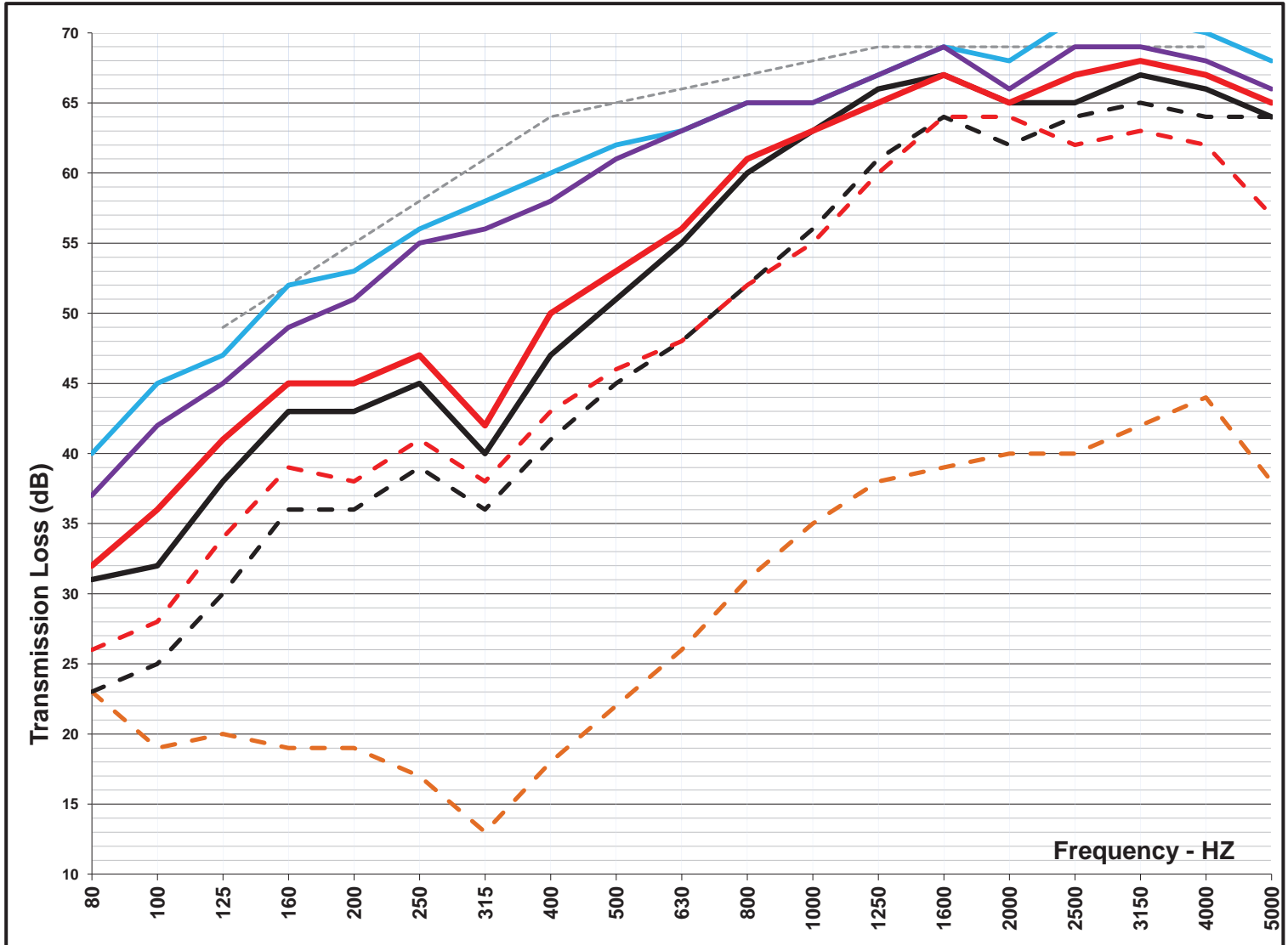
	STC	OITC	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	
1/3 Octave Band (HZ)																						
42 STC Curve																						
----- Anderson Series 100	25	22	23	19	20	19	19	17	13	18	22	26	31	35	38	39	40	40	42	44	38	
----- Soundproof Window 1/4" 3"AS	48	37	23	25	30	36	36	39	36	41	45	48	52	56	61	64	62	64	65	64	64	
----- Soundproof Window 3/8" 3"AS	50	40	26	28	34	39	38	41	38	43	46	48	52	55	60	64	64	62	63	62	57	
----- Quiet Window 3/8" Acrylic	42	33	20	21	26	31	31	34	30	37	41	45	50	53	59	63	63	63	61	58	60	
----- Competitor 1/4" Lami glass	40	30	18	19	22	28	29	31	28	32	36	40	45	49	52	54	55	55	57	60	59	
----- Competitor 3/8" Lami glass	41	33	21	23	26	32	31	33	29	33	37	40	45	48	51	53	55	55	57	61	60	
----- Competitor 1/4" Acrylic	36	27	16	15	19	23	24	29	24	29	32	37	43	47	51	54	55	55	56	57	53	

These tests accurately compare Soundproof Windows with our competition. We were very careful to make certain the competition windows were installed to get the best possible acoustic results. Seals and the acoustic design of the window frames are critical for good noise reduction results.

# OUR BASIC PRODUCTS

Soundproof Windows using 1/4" & 3/8" Laminated Glass at 3" and 5" Air Space (AS)

Our Recording Studio Products



Orange: Anderson Series 100 window used for testing with these other windows

Black: Soundproof Window with 1/4" laminated glass -results at 3" air space(dotted) and 5" air space(solid)

Blue : Soundproof Window with 3/8" laminated glass -results at 3" air space(dotted) and 5" air space(solid)

Purple: Our Recording Studio Windows

Blue: Our Recording Studio Sliding Glass Doors

1/3 Octave Band (HZ)	STC		OITC																		
	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000		
65 STC Curve																					
----- Anderson Series 100	25	22	23	19	20	19	19	17	13	18	22	26	31	35	38	39	40	40	42	44	38
----- Soundproof Window 1/4" 3"AS	48	37	23	25	30	36	36	39	36	41	45	48	52	56	61	64	62	64	65	64	64
----- Soundproof Window 1/4" 5"AS	52	44	31	32	38	43	43	45	40	47	51	55	60	63	66	67	65	65	67	66	64
----- Soundproof Window 3/8" 3"AS	50	40	26	28	34	39	38	41	38	43	46	48	52	55	60	64	64	62	63	62	57
----- Soundproof Window 3/8" 5"AS	54	47	32	36	41	45	45	47	42	50	53	56	61	63	65	67	65	67	68	67	65
----- SGD650 SGD650 11"	65	55	40	45	47	52	53	56	58	60	62	63	65	65	67	69	68	71	71	70	68
----- ST650 ST650R	64	53	37	42	45	49	51	55	56	58	61	63	65	65	67	69	66	69	69	68	66