



TE Connectivity

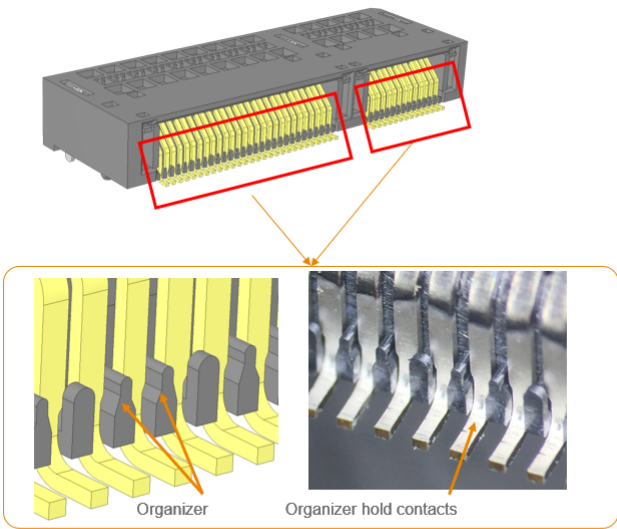
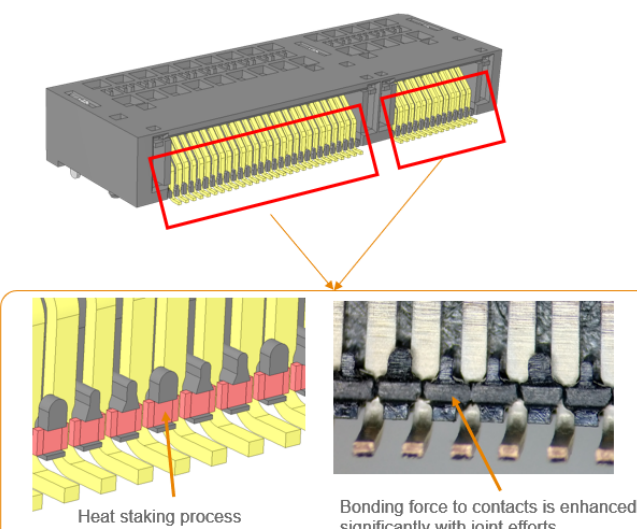
Product Change Notification: PCN-22-132693

PCN Date: 31-MAR-22

TE would like to inform you of the following change(s) to the listed TE Connectivity Product. In case of any further questions about this change(s), please contact your TE Connectivity Sales Engineer. Affected part, drawing and/or specification numbers are listed on the attached sheet(s).

**General Product Description:**  
SLIVER 2.0 RIGHT ANGLE TYPE CONNECTOR

**Description of Changes**  
Please be aware of an upcoming feature change to the listed part numbers. Before: There is no heat staking on organizer of connector After: Add heat staking on organizer of connector Reference performance test data: SI report

<p><b>Current Process</b></p>  <p>Current process- depending on organizer to position and hold the contacts</p>	<p><b>New Process</b></p>  <p>New process with heat staking- more robust process to hold contacts</p>
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**Other attachments:**  
[Optimization for RA sliver connector](#)  
[SI Report](#)

**Reason for Changes:**

<b>PCN Attributes:</b>	
<b>Product Category:</b> Connectors	<b>Kind of Change:</b> Geometry
<b>Change Feature:</b> Special Design Feature	<b>Potential Customer Impact:</b> No Customer Impact
<b>Remarks:</b>	

<b>Estimated Dates:</b>	
<b>Last Order Date (Obsolete Parts Only):</b>	<b>First Ship Date of Changed Items (Changed Parts Only):</b> 07-APR-2022
<b>Last Ship Date of Changed Items (Obsolete Parts Only):</b>	<b>Last Date for Mixed Shipments: (Changed Parts Only):</b> No Mixed Shipments
<b>Effectivity Date:</b>	<b>Date of First Samples:</b>

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
<a href="#">2327670-1</a>	NO						
<a href="#">2327670-3</a>	NO						
<a href="#">2327671-1</a>	NO						
<a href="#">2327671-3</a>	NO						
<a href="#">2327672-1</a>	NO						
<a href="#">2327672-3</a>	NO						
<a href="#">2331814-1</a>	NO						
<a href="#">2331814-2</a>	NO						
<a href="#">2331814-3</a>	NO						
<a href="#">2332205-1</a>	NO						
<a href="#">2332205-2</a>	NO						
<a href="#">2332205-3</a>	NO						
<a href="#">2332208-1</a>	NO						
<a href="#">2332208-2</a>	NO						
<a href="#">2332208-3</a>	NO						
<a href="#">2336568-1</a>	NO						
<a href="#">2336568-3</a>	NO						
<a href="#">2336568-5</a>	NO						
<a href="#">2336568-6</a>	NO						
<a href="#">2345808-1</a>	NO						
<a href="#">2345808-3</a>	NO						
<a href="#">2345808-6</a>	NO						

The documents listed below are being modified. Related parts that are not explicitly listed on this PCN are not being modified or discontinued as per the PCN. The Last Order Date, Last Ship Date, First Date to Ship Changed Parts and last date for Mixed Shipments apply only to parts explicitly listed on this PCN.

Customer Drawing(s) Being Modified:

Drawing Number	Related Part Number	Customer Part Number	Current Revision	New Revision
<a href="#">2327670</a>	2327670-1		C	
<a href="#">2327672</a>	2327672-1		C	
<a href="#">2331814</a>	2331814-1		B	
<a href="#">2332205</a>	2332205-2		B	
<a href="#">2336568</a>	2336568-1		C	
<a href="#">2345808</a>	2345808-1, 2345808-6		B	

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
<a href="#">2327671-3</a>	NO						

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
<a href="#">2327670-1</a>	NO						
<a href="#">2327670-3</a>	NO						
<a href="#">2327671-1</a>	NO						
<a href="#">2327671-3</a>	NO						
<a href="#">2327672-1</a>	NO						
<a href="#">2327672-3</a>	NO						
<a href="#">2331814-1</a>	NO						
<a href="#">2331814-2</a>	NO						
<a href="#">2331814-3</a>	NO						
<a href="#">2332205-1</a>	NO						
<a href="#">2332205-2</a>	NO						
<a href="#">2332205-3</a>	NO						
<a href="#">2332208-1</a>	NO						

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
<a href="#">2332208-2</a>	NO						
<a href="#">2332208-3</a>	NO						
<a href="#">2336568-1</a>	NO						
<a href="#">2336568-3</a>	NO						
<a href="#">2336568-5</a>	NO						
<a href="#">2336568-6</a>	NO						
<a href="#">2345808-1</a>	NO						
<a href="#">2345808-3</a>	NO						
<a href="#">2345808-6</a>	NO						

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Customer Drawing(s) Being Modified:

Drawing Number	Related Part Number	Customer Part Number	Current Revision	New Revision
<a href="#">2345808</a>	2345808-6		B	

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
<a href="#">2327670-1</a>	NO						
<a href="#">2327670-3</a>	NO						
<a href="#">2327671-1</a>	NO						
<a href="#">2327671-3</a>	NO						
<a href="#">2327672-1</a>	NO						
<a href="#">2327672-3</a>	NO						
<a href="#">2331814-1</a>	NO						
<a href="#">2331814-2</a>	NO						
<a href="#">2331814-3</a>	NO						
<a href="#">2332205-1</a>	NO						
<a href="#">2332205-2</a>	NO						
<a href="#">2332205-3</a>	NO						
<a href="#">2332208-1</a>	NO						
<a href="#">2332208-2</a>	NO						
<a href="#">2332208-3</a>	NO						
<a href="#">2336568-1</a>	NO						
<a href="#">2336568-3</a>	NO						
<a href="#">2336568-5</a>	NO						
<a href="#">2336568-6</a>	NO						
<a href="#">2345808-1</a>	NO						
<a href="#">2345808-3</a>	NO						

The documents listed below are being modified. Related parts that are not explicitly listed on this PCN are not being modified or discontinued as per the PCN. The Last Order Date, Last Ship Date, First Date to Ship Changed Parts and last date for Mixed Shipments apply only to parts explicitly listed on this PCN.

Customer Drawing(s) Being Modified:

Drawing Number	Related Part Number	Customer Part Number	Current Revision	New Revision
<a href="#">2327670</a>	2327670-1		C	
<a href="#">2327672</a>	2327672-1		C	
<a href="#">2331814</a>	2331814-1		B	
<a href="#">2332205</a>	2332205-2		B	
<a href="#">2336568</a>	2336568-1		C	
<a href="#">2345808</a>	2345808-1		B	

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
<a href="#">2332208-3</a>	NO						

# Process Optimization for RA Sliver Connector

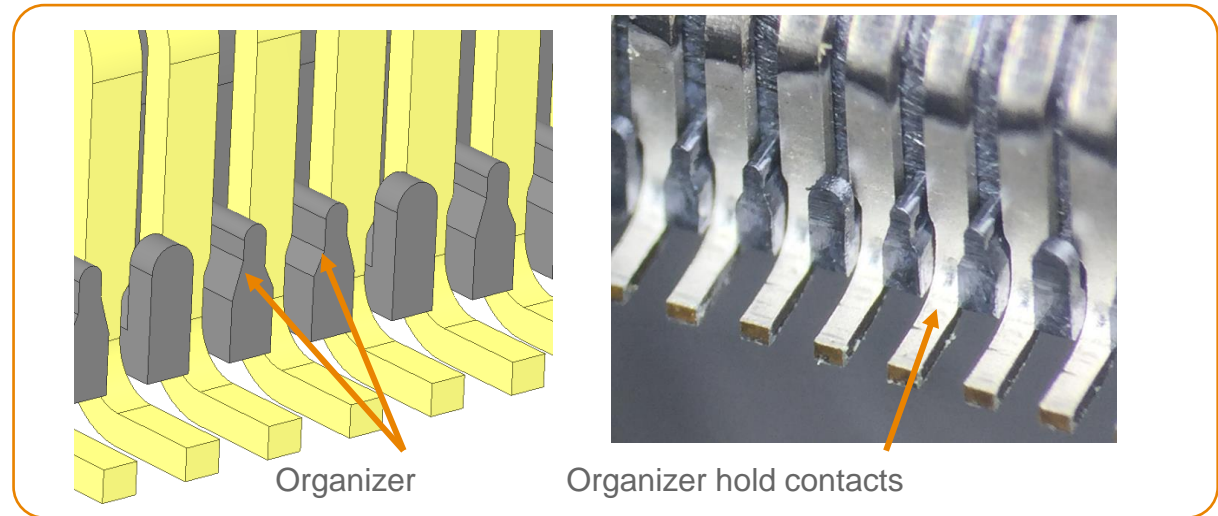
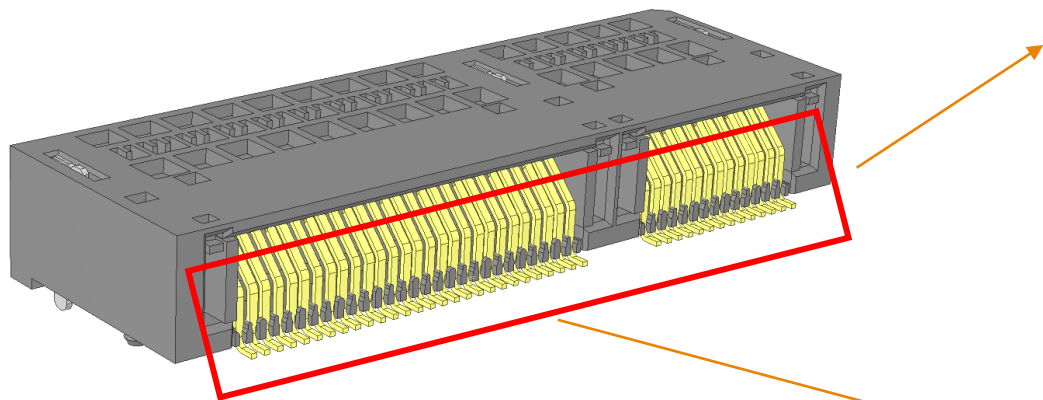
Heat staking configuration

EVERY CONNECTION COUNTS

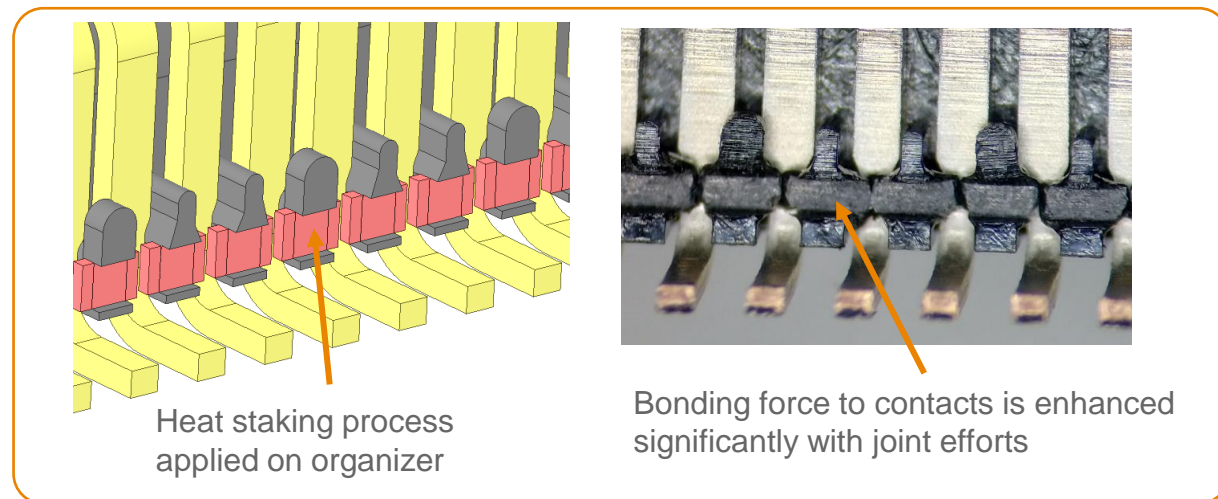




# Process Optimization for RA Sliver Connector



**Current process- depending on organizer to position and hold the contacts**



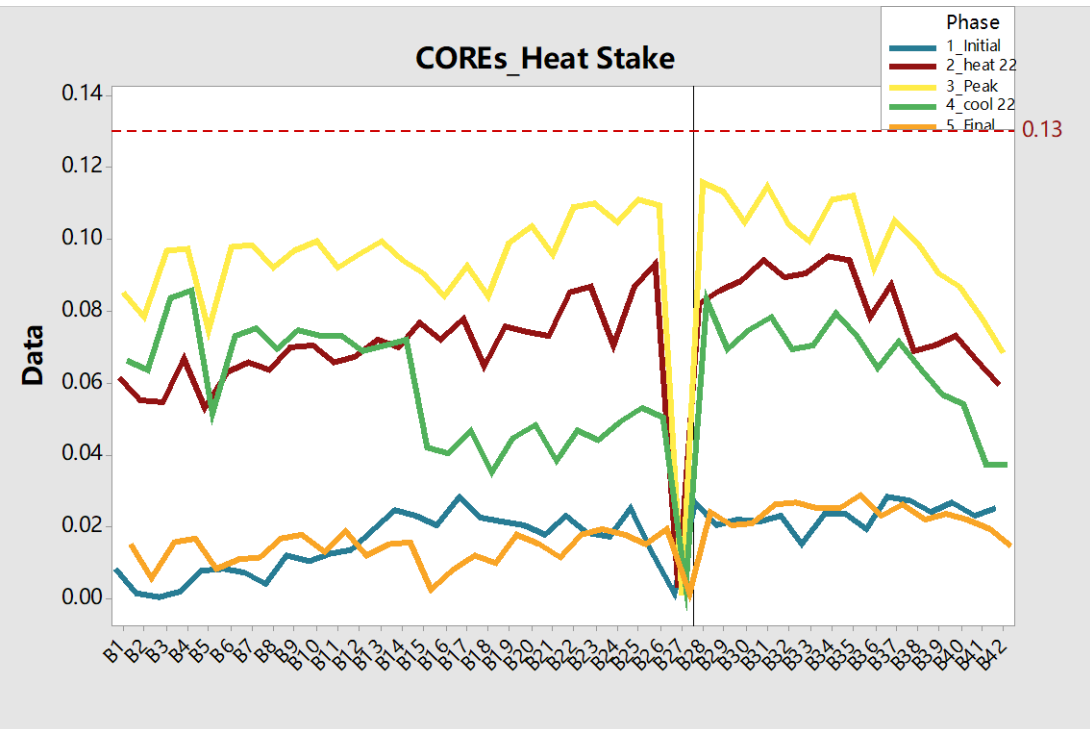
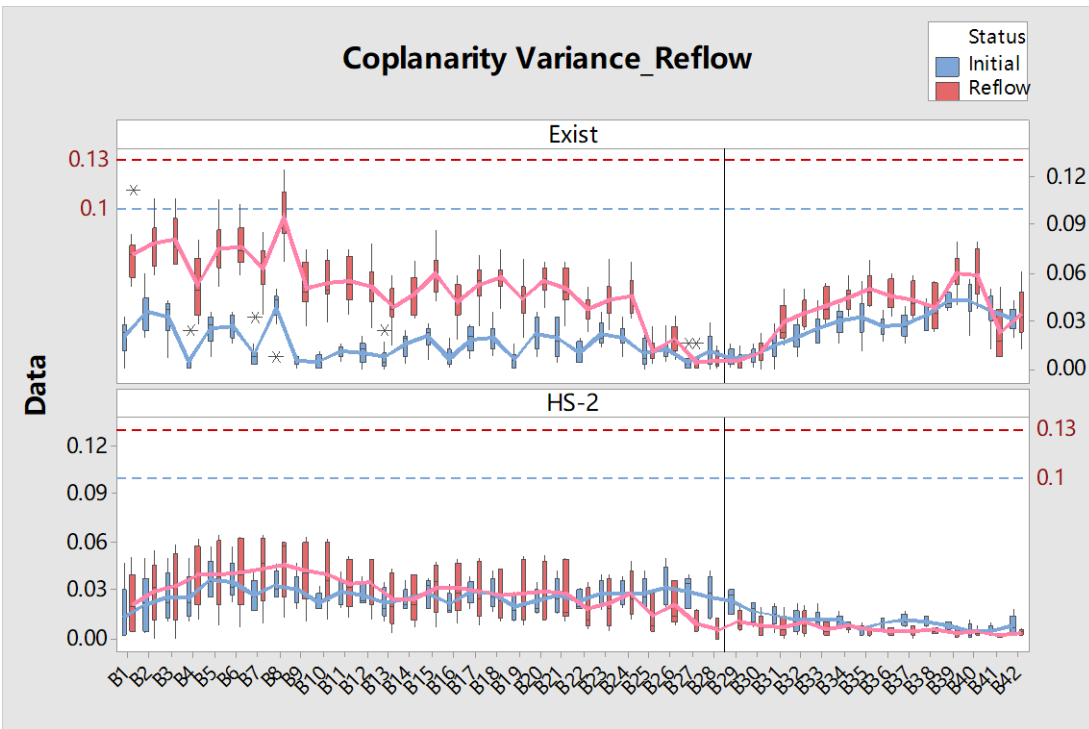
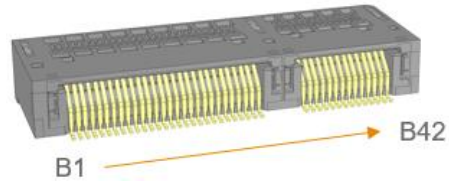
**New process with heat staking- more robust process to hold contacts**

# Verification for heat staking configuration

1. Coplanarity variance on reflow: all solder tail keep within 0.1mm after reflow
2. Cores: <0.10mm at 220c cooling.
3. Trial run: 240pcs run in Nov-20. all good  
Solder paste T>0.13mm, Stencil T=0.15mm  
Profile: Peak temp:235-240c, over 217c: 67-76s
4. Electrical performance is OK ,reference SI report



SI Report



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**ANY  
CONNECTION  
CAN CHANGE  
THE WORLD**

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EVERY CONNECTION COUNTS



# Sliver 2.0 RA Heat-Staking SI Test Data

SH Lab  
20201130

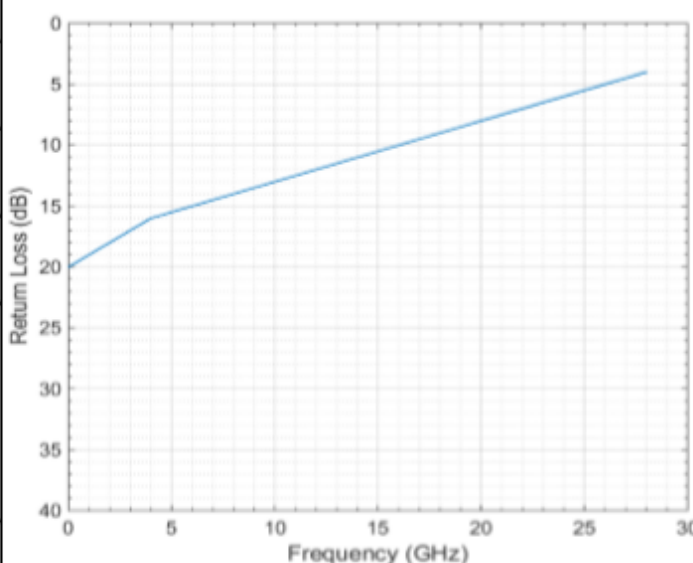
EVERY CONNECTION COUNTS





# Test spec – SFF-TA-1002 R1.3

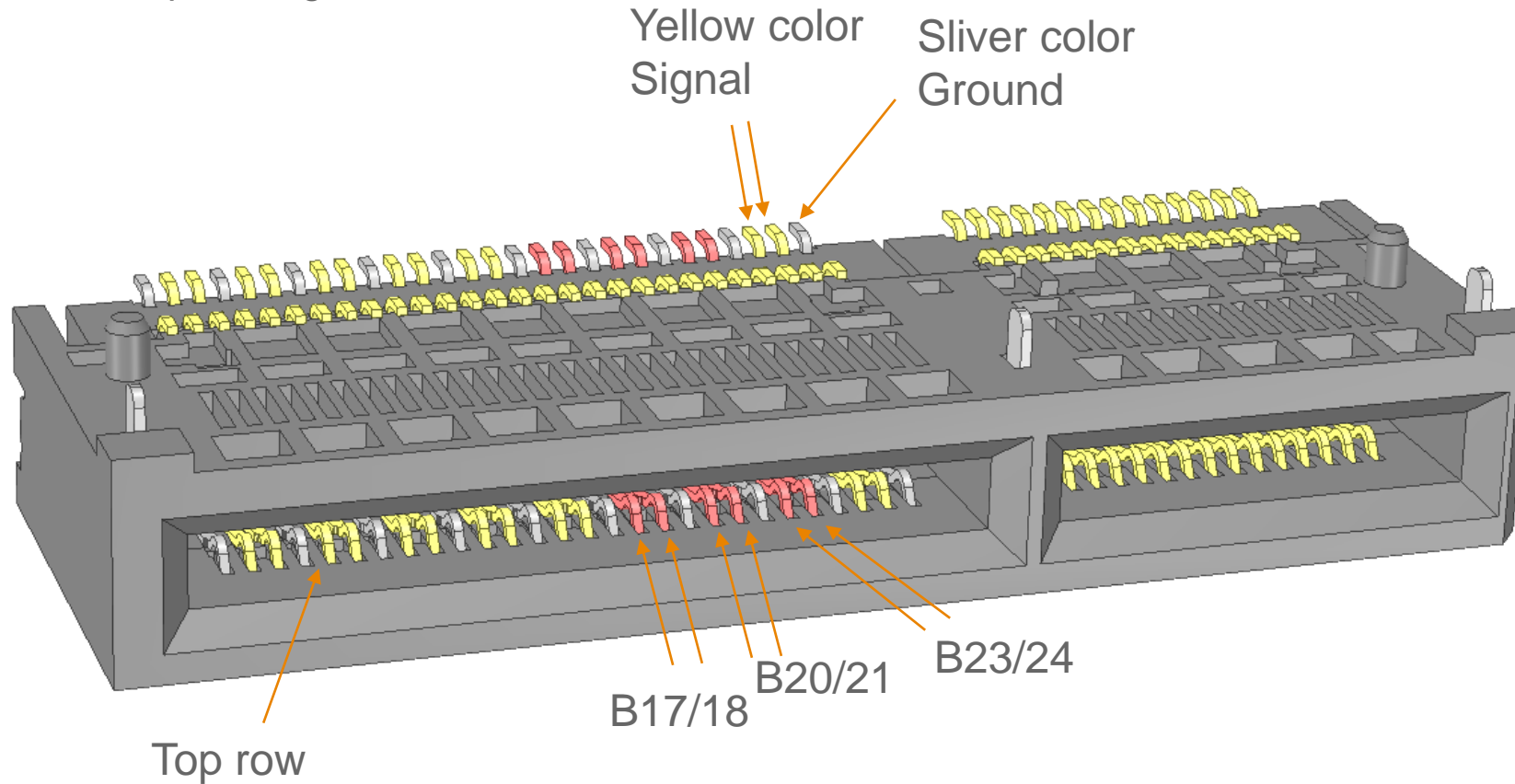
**TABLE 5-5. VERTICAL, RIGHT ANGLE AND STRADDLE MOUNT CONNECTOR SIGNAL INTEGRITY REQUIREMENTS**

Line Rate	Insertion Loss	Return Loss	Power Sum Near End and Far End Crosstalk
25 GT/s NRZ	Loss up to 16GHz $\leq$ 1dB		Up to 16GHz $\leq$ 40dB
28 GT/s NRZ	Loss up to 16GHz $\leq$ 1dB		Up to 16GHz $\leq$ 40dB
56 GT/s PAM4	Loss up to 16GHz $\leq$ 1dB		Up to 16GHz $\leq$ 40dB
32 GT/s NRZ	Loss up to 16GHz $\leq$ 1dB		Up to 16GHz $\leq$ 40dB
56 GT/s NRZ	Loss up to 16GHz $\leq$ 1dB For frequency >16GHz and $\leq$ 28GHz. Loss up to 1.5dB		Up to 16GHz $\leq$ 40dB Frequency >16GHz and $\leq$ 28GHz. Up to 36dB
112 GT/s PAM4	Loss up to 16GHz $\leq$ 1dB For frequency >16GHz and $\leq$ 28GHz. Loss up to 1.5dB		Up to 16GHz $\leq$ 40dB Frequency >16GHz and $\leq$ 28GHz. Up to 36dB

# Test board

Select adjacent signal contact B17/18, B20/21, B23/24 for the signal test.

All shape of Signal contact are same

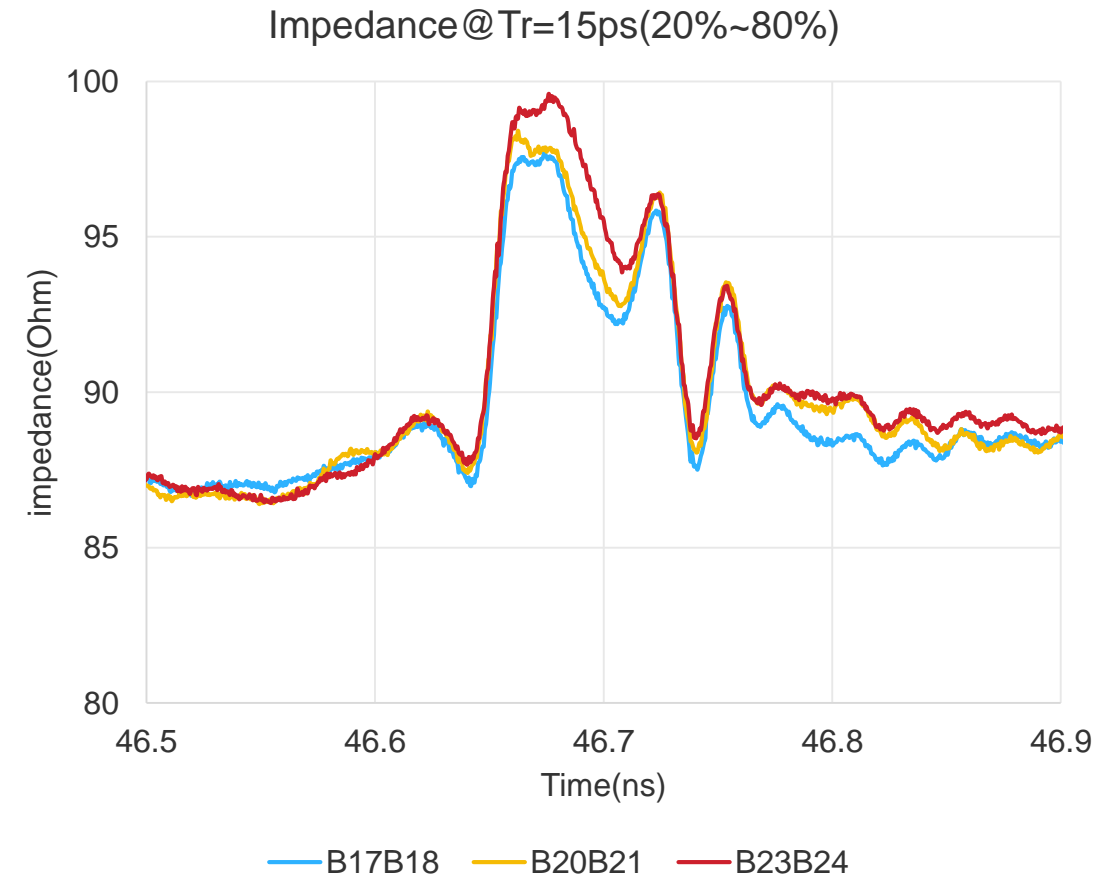
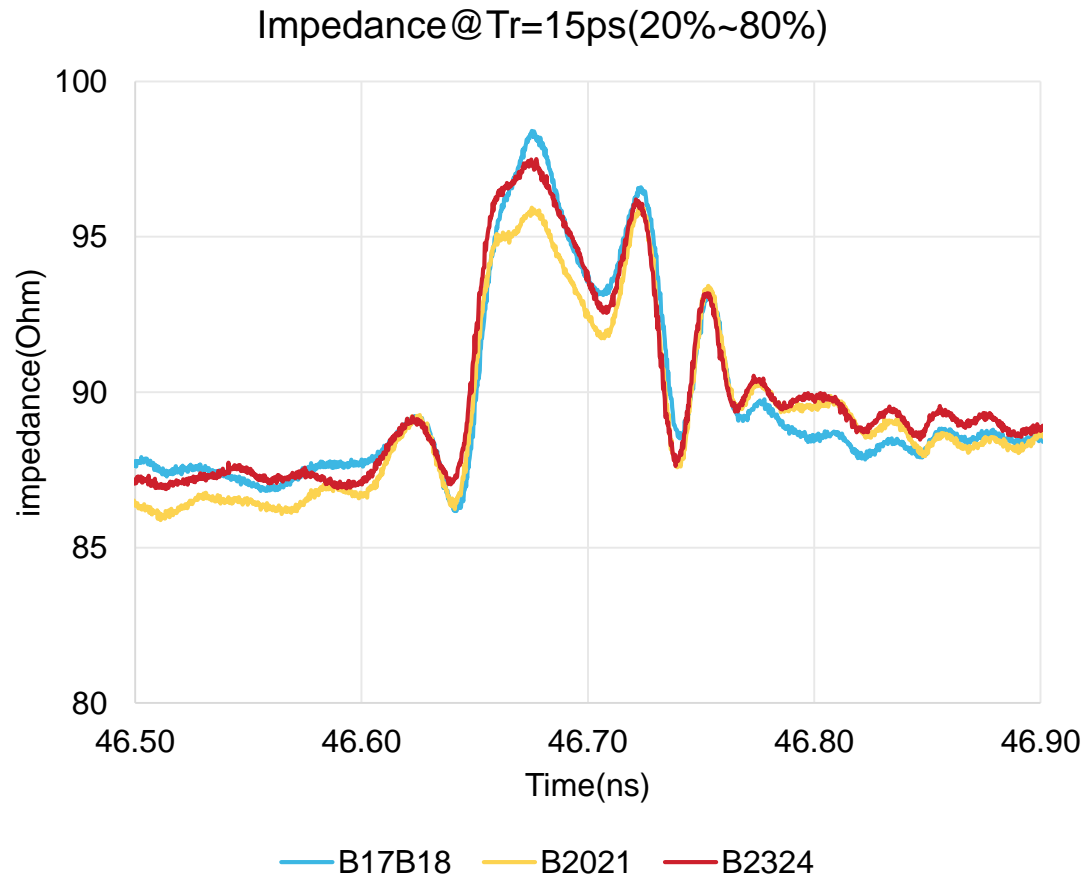


Test board

# Impedance, no diff. BTW Heat stake & Original

## Heat stake

## Original

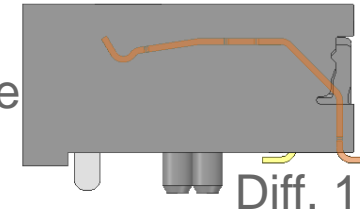


# Insertion Loss\_ Meet spec

Top row \_ Heat stake

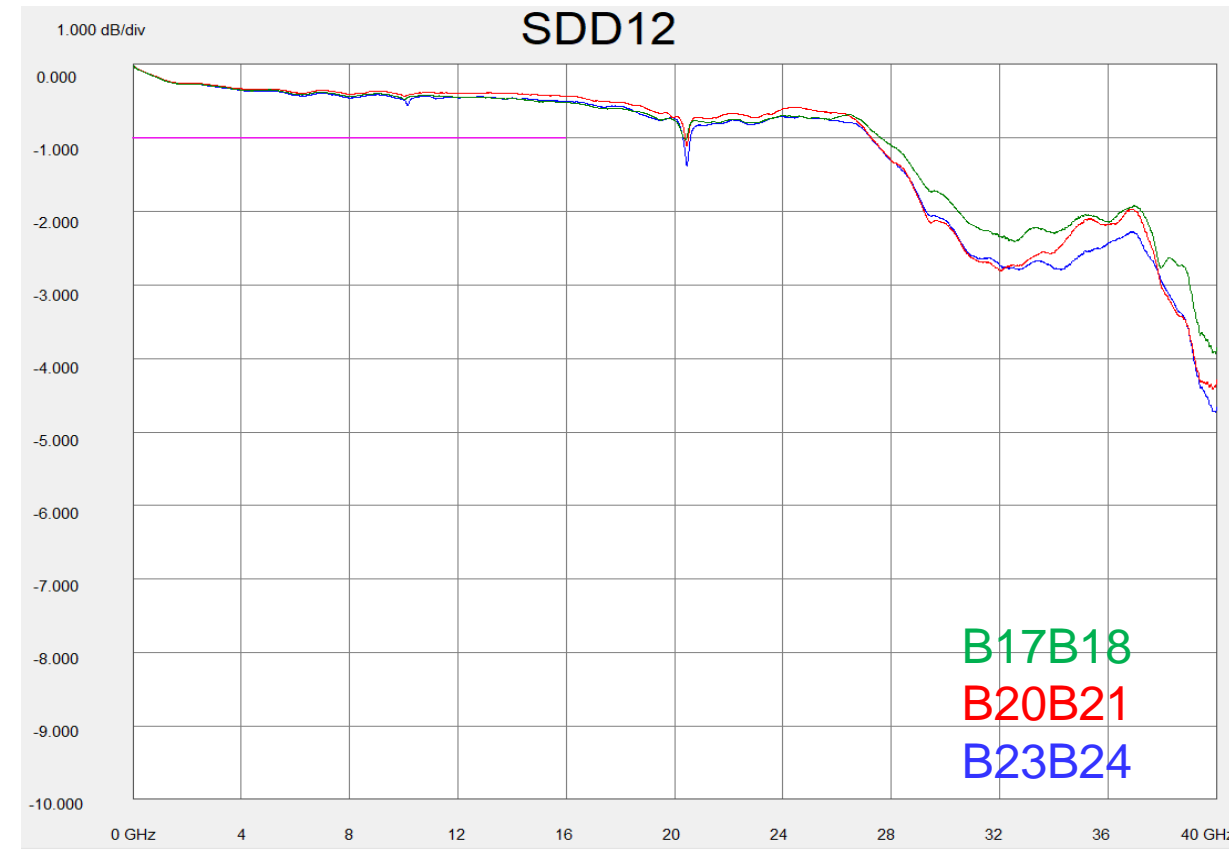
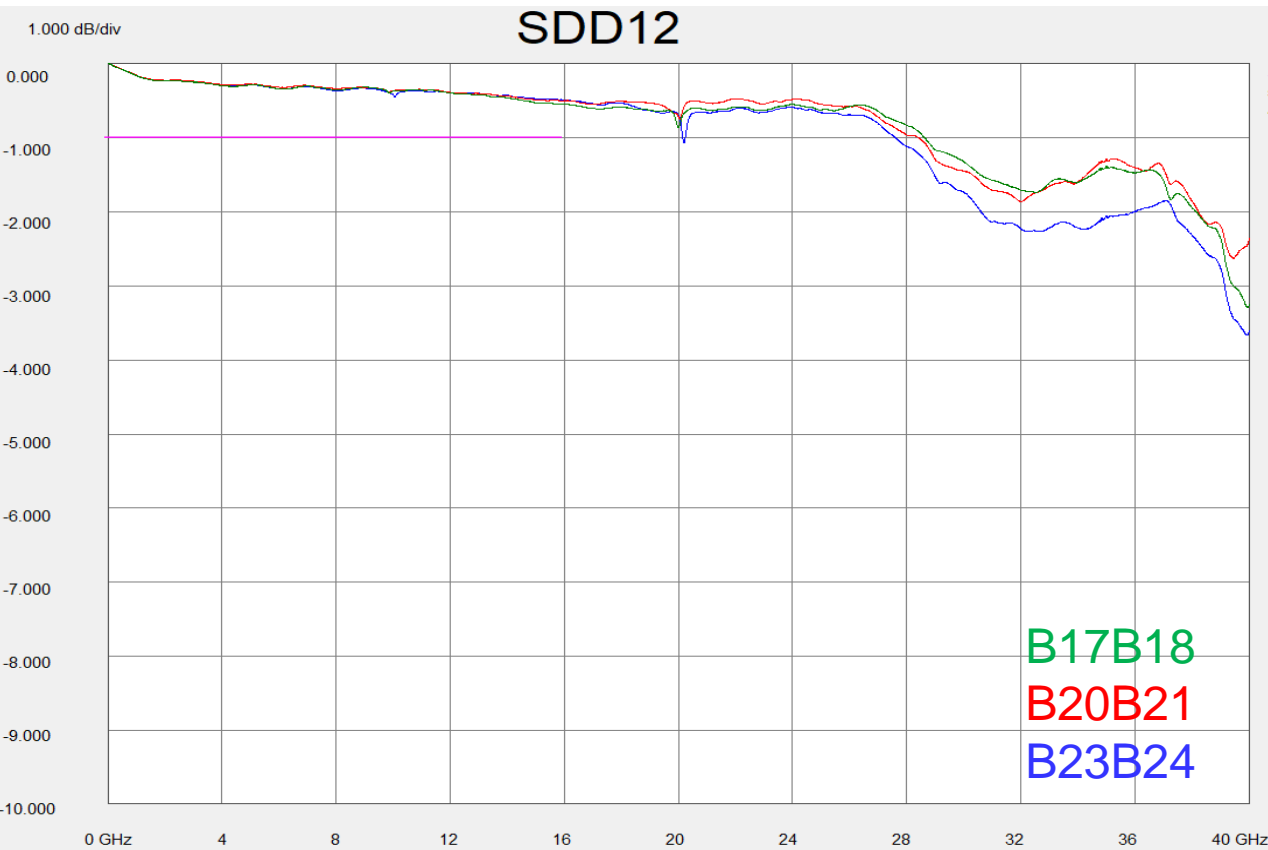
SDD12 = Signal from Diff. 2 to Diff. 1

Diff. 2  
AIC side



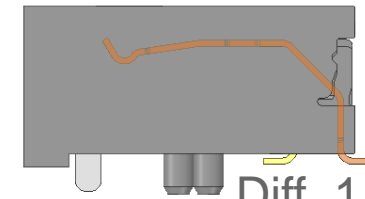
Diff. 1  
Host side

Top row \_ Original





# Return loss \_ Host side\_ Meet spec

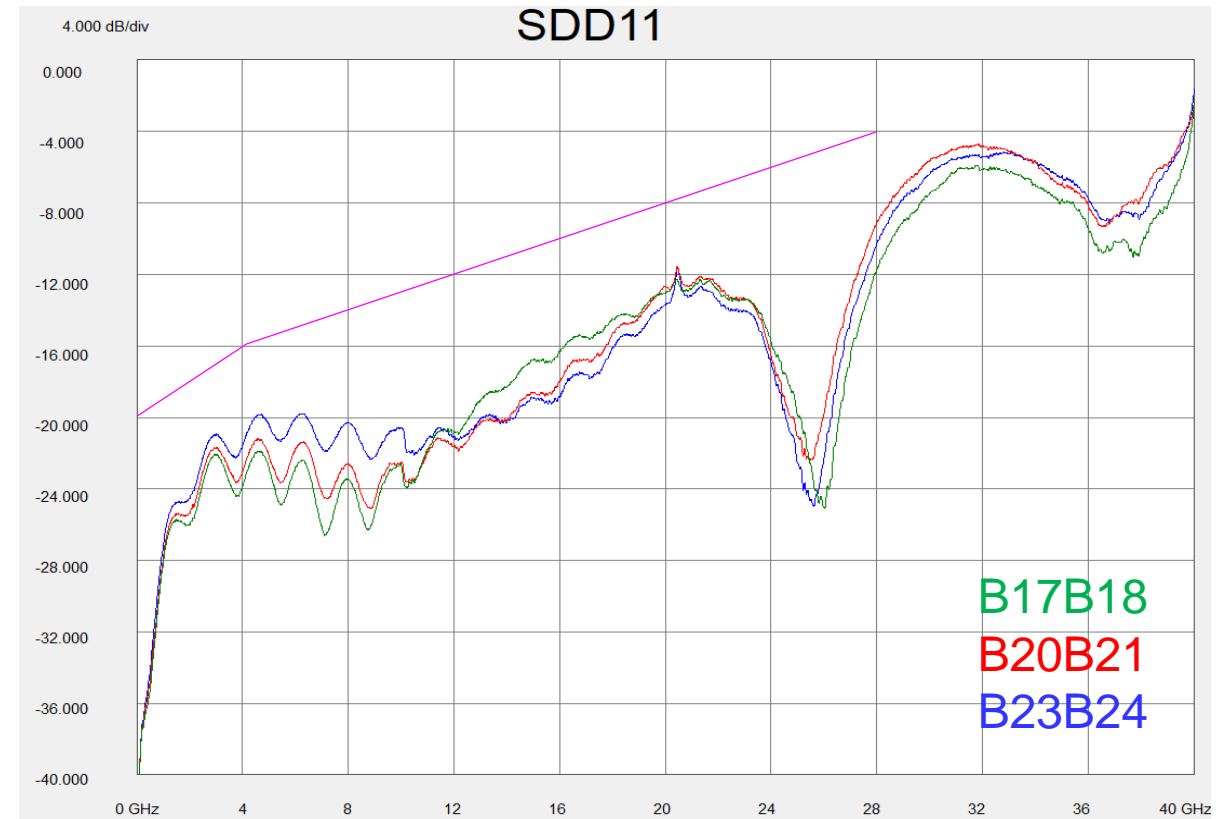
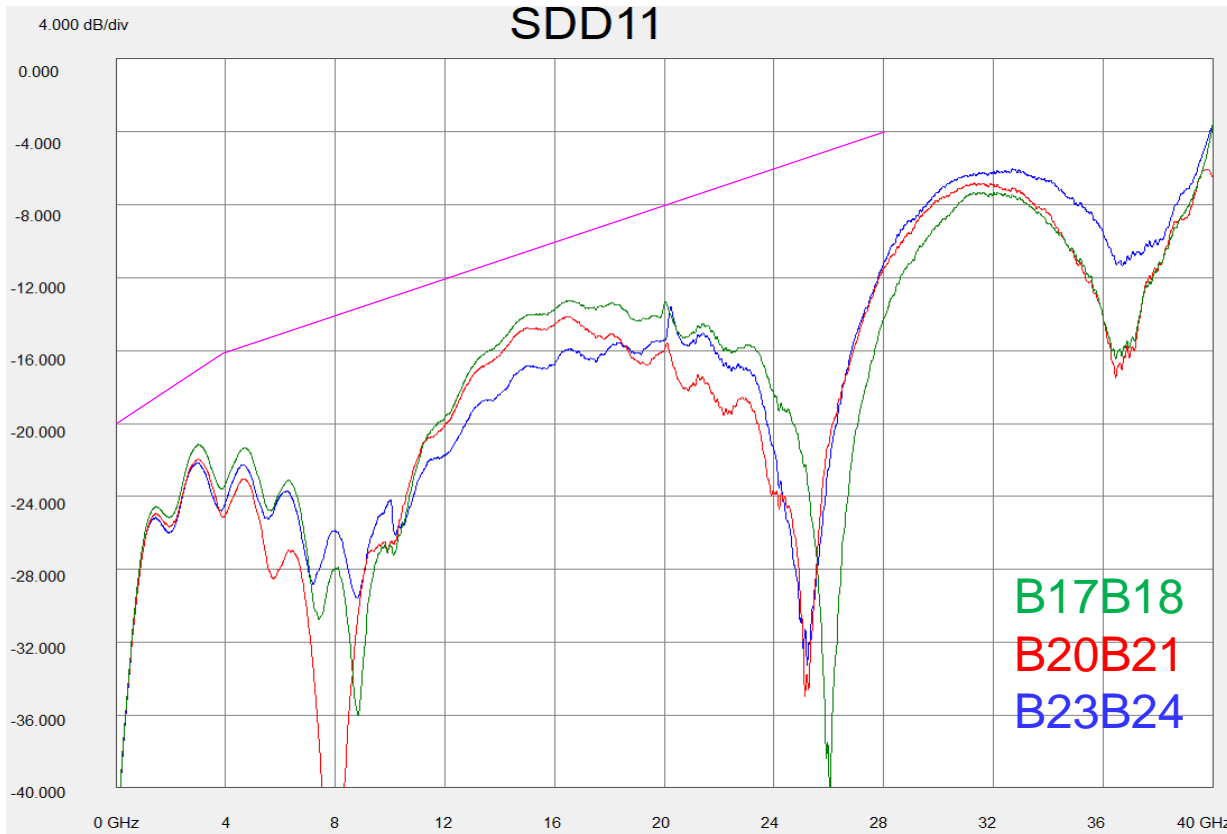


Diff. 1  
Host side

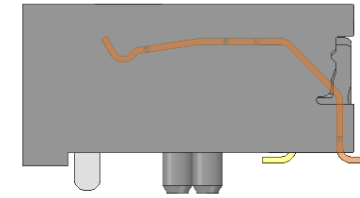
## Top row \_ Heat stake

## Top row \_ Original

SDD11 = Signal from Diff. 1 to Diff. 1



Diff.2  
AIC side

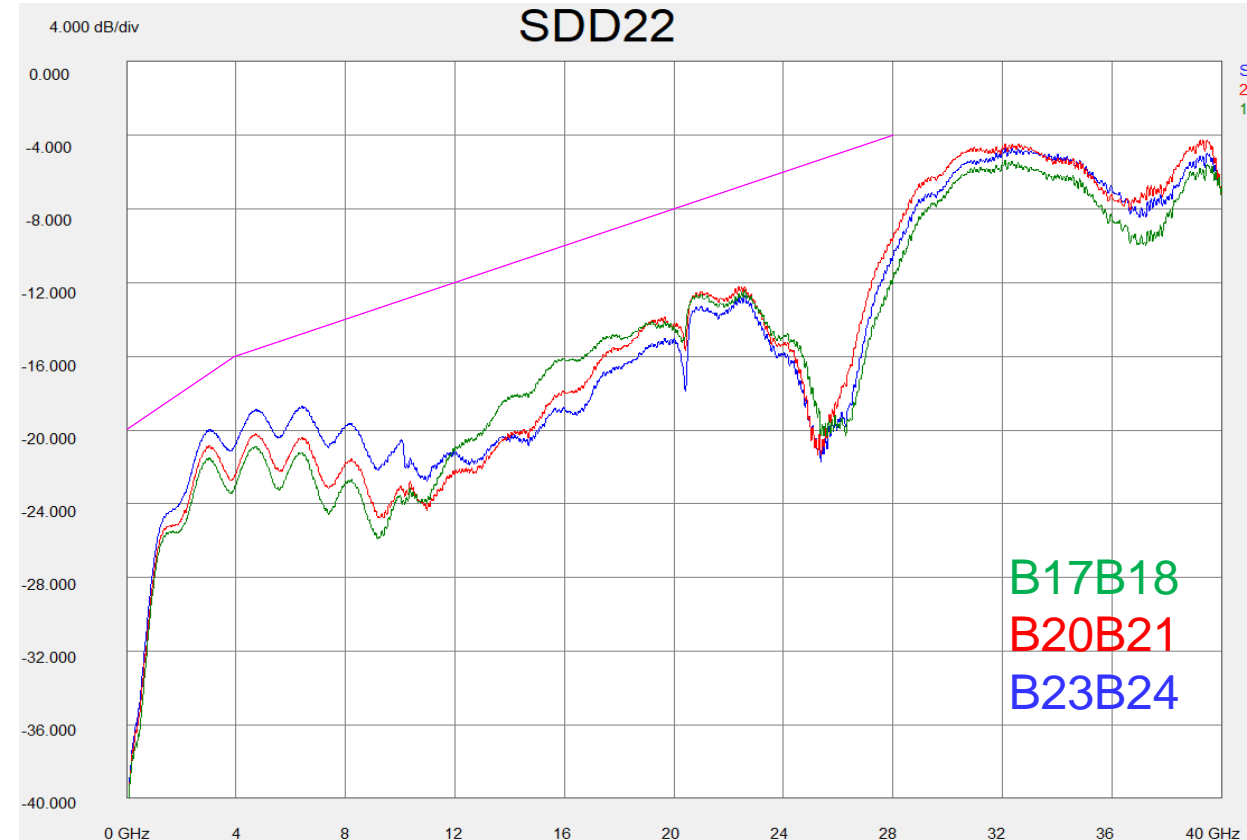
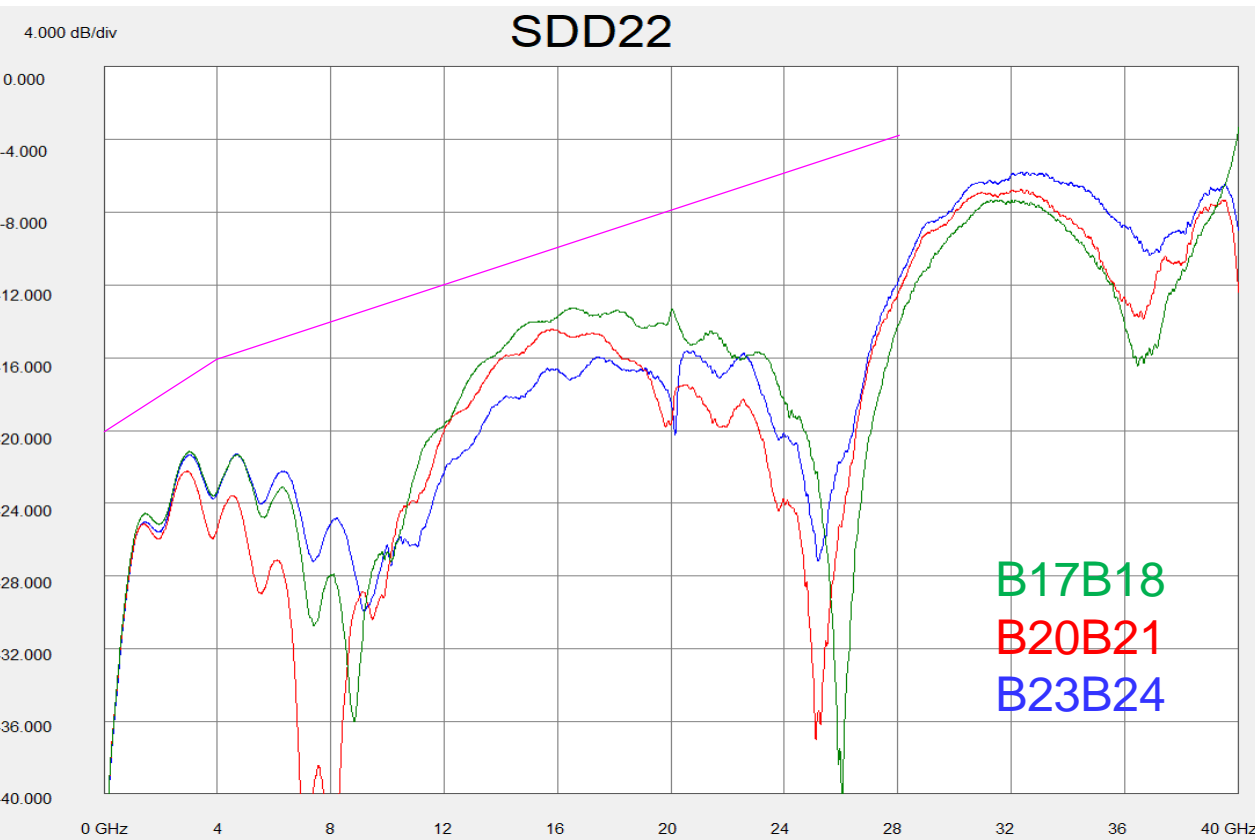


# Return loss \_AIC side \_Meet spec

Top row \_ Heat stake

Top row \_ Original

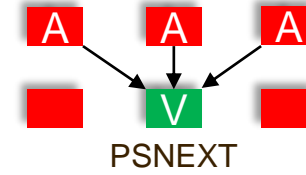
SDD22 = Signal from Diff.2 to Diff.2



# Power Sum \_ Near end crosstalk \_ Meet spec

Top row \_ Heat stake

Top row \_ Original

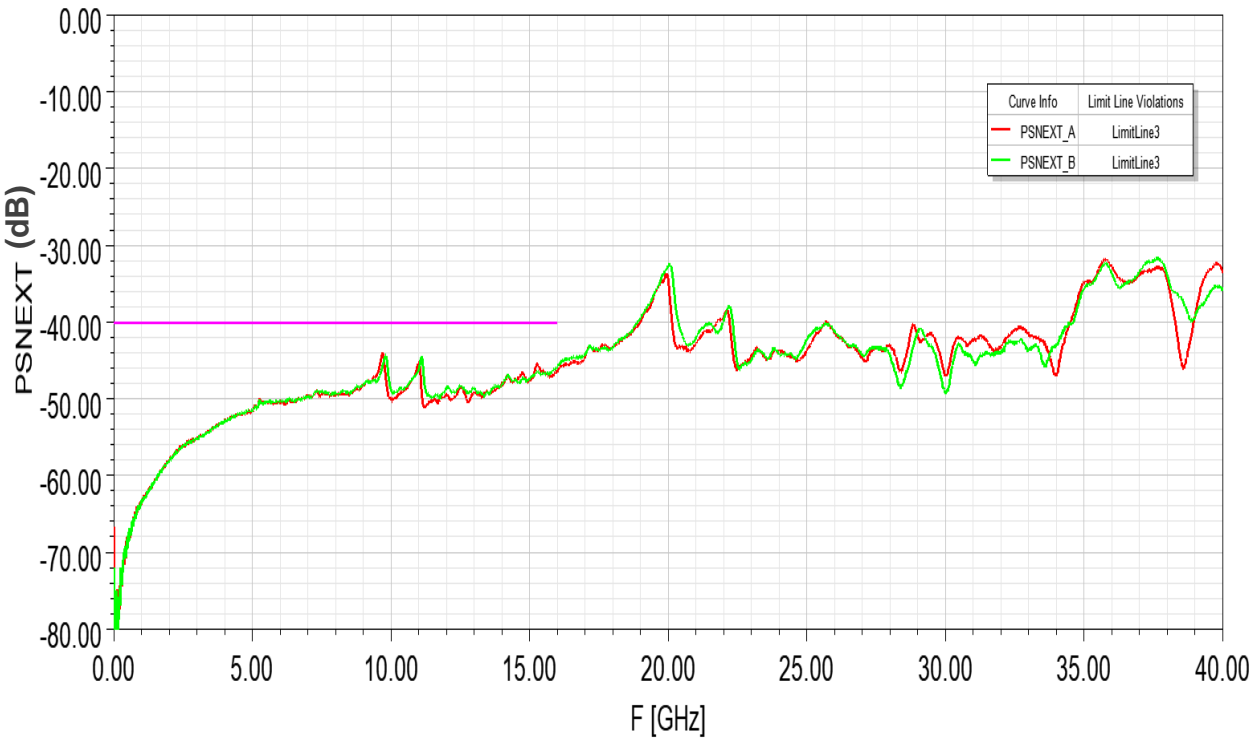


**A** Aggressor

**V** Victim

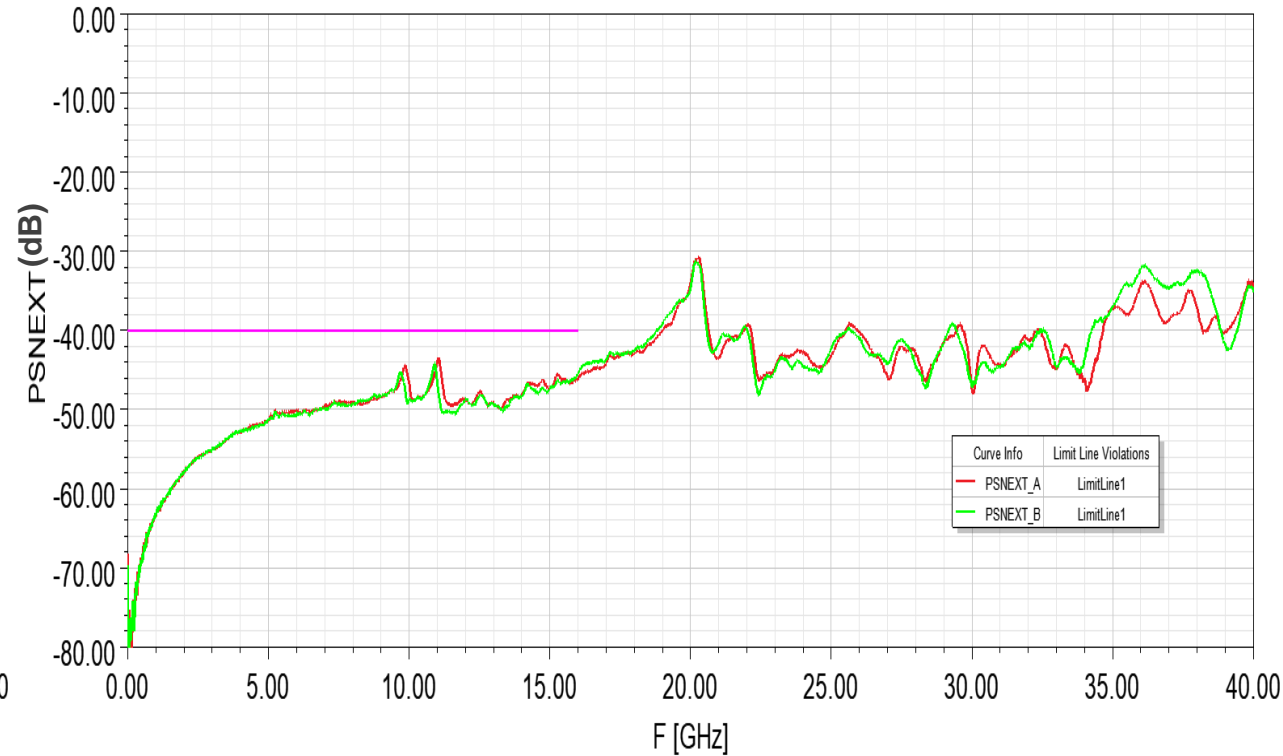
PSNEXT

RA\_TEST\_NEXT



PS\_NEXT

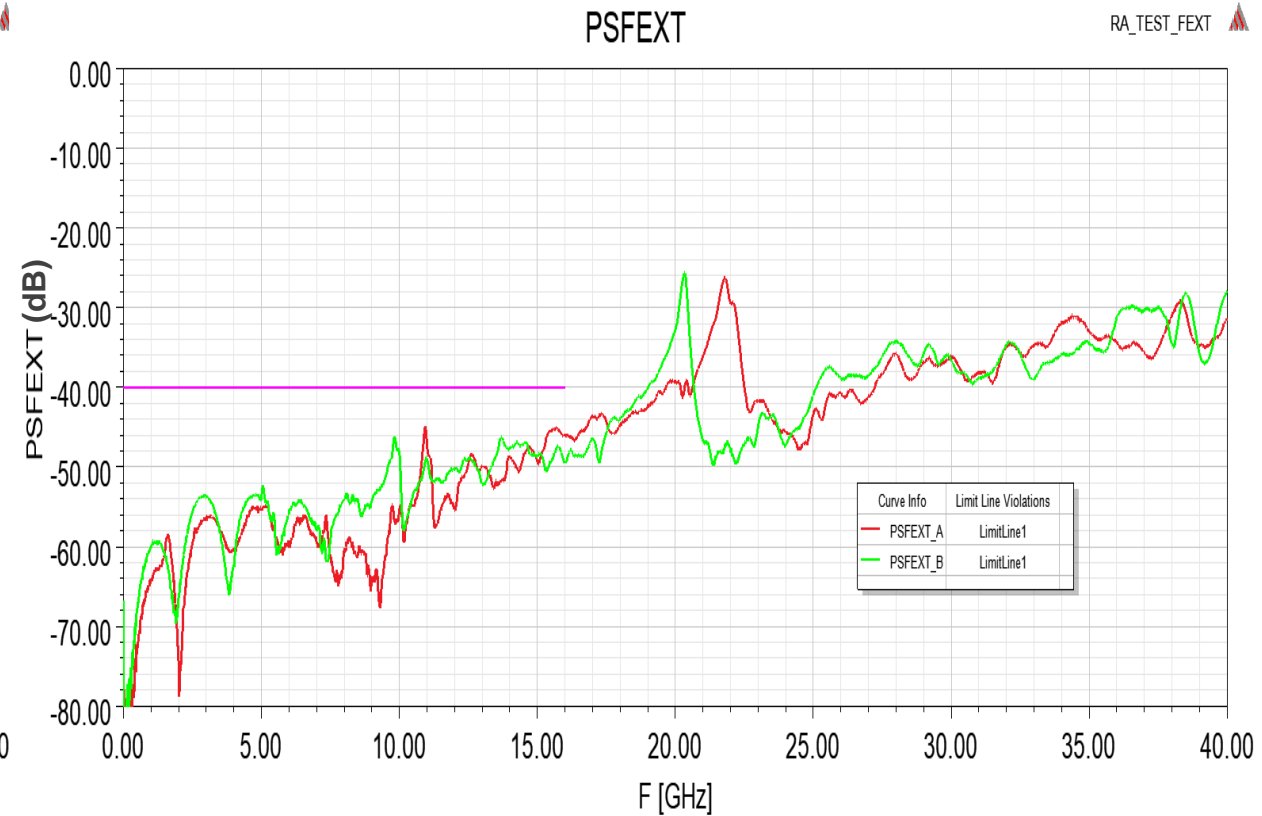
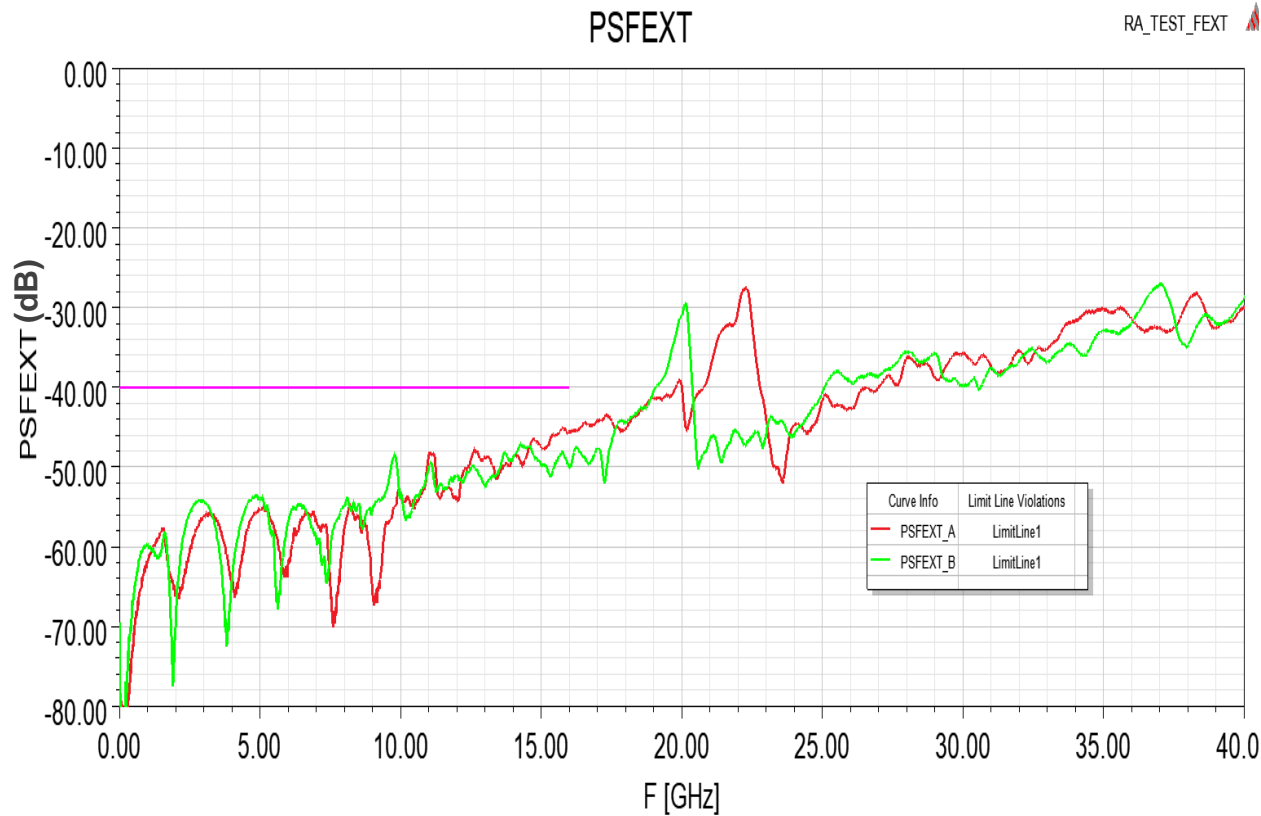
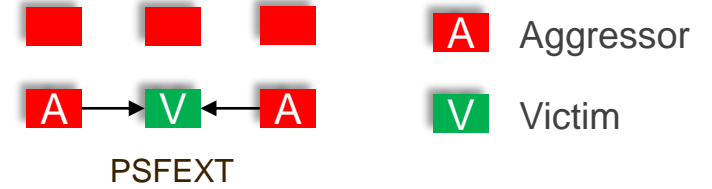
RA\_TEST\_NEXT



# Power Sum \_ Far end crosstalk \_ Meet spec

Top row \_ Heat stake

Top row \_ Original





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**ANY  
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EVERY CONNECTION COUNTS

