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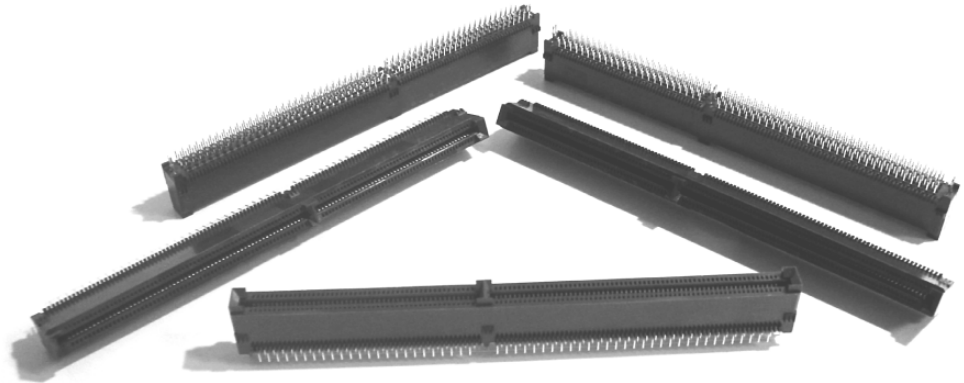
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## High Speed Standard Edge Connector

### Product Facts

- 1:1 signal-to-ground ratio
- Designed for signal transmissions with rise and fall times of 0.5 nanoseconds or greater
- 40 signal/ground pairs per linear inch
- Less than 10 picosecond skew
- Propagation delay is typically 75 picoseconds from motherboard to daughtercard at the top of the connector
- 43 ohm impedance
- Multiple simultaneous switching: 7% max. @ 0.5 ns; 5% max. @ 1.0 ns
- High performance maintained when using up to 50% of the ground contacts for power
- 50 to 130 dual positions (in increments of 10) and 73 dual position



High Speed Standard Edge connectors are the answer for a low cost, one-piece approach to high speed signal transmissions or density requirements. These Tyco Electronics connectors have an upper row of signal contacts on 1.27 [.050] centerline with a lower row of ground contacts within each circuit cavity. This achieves 0.64 [.025] center-

line density in a 1.27 [.050] centerline connector with 40 signal/ground pairs per linear inch and a 1:1 signal-to-ground ratio. The staggered contact height also reduces the daughtercard mating force.

Board retainers align the connector with the motherboard and retain it for soldering. The use of high temperature tolerant materi-

als ensures that these connectors will withstand various wave and reflow soldering techniques.

Tyco Electronics High Speed Standard Edge connectors are available in sizes of 50 to 130 dual positions (in increments of 10) and a 73 dual position, with solder lead lengths of 2.54 [.100] and 3.18 [.125].

### Performance Specifications

#### Contact Current Rating —

Signal contact — 1 ampere max.  
Ground contact — 1.5 amperes max.  
Preground contact — 1 ampere max.

#### Termination Resistance —

20 milliohms max. (initial)  
40 milliohms max. (final)

#### Dielectric Withstanding Voltage —

500 volts AC min.

#### Insulation Resistance —

1000 megohms min.

#### Mating Force — 2.78 N [10 oz] max.

per dual signal/ground contact pair  
using test blade

#### Durability (Mating Cycles) —

Tested to 25 cycles with test blade

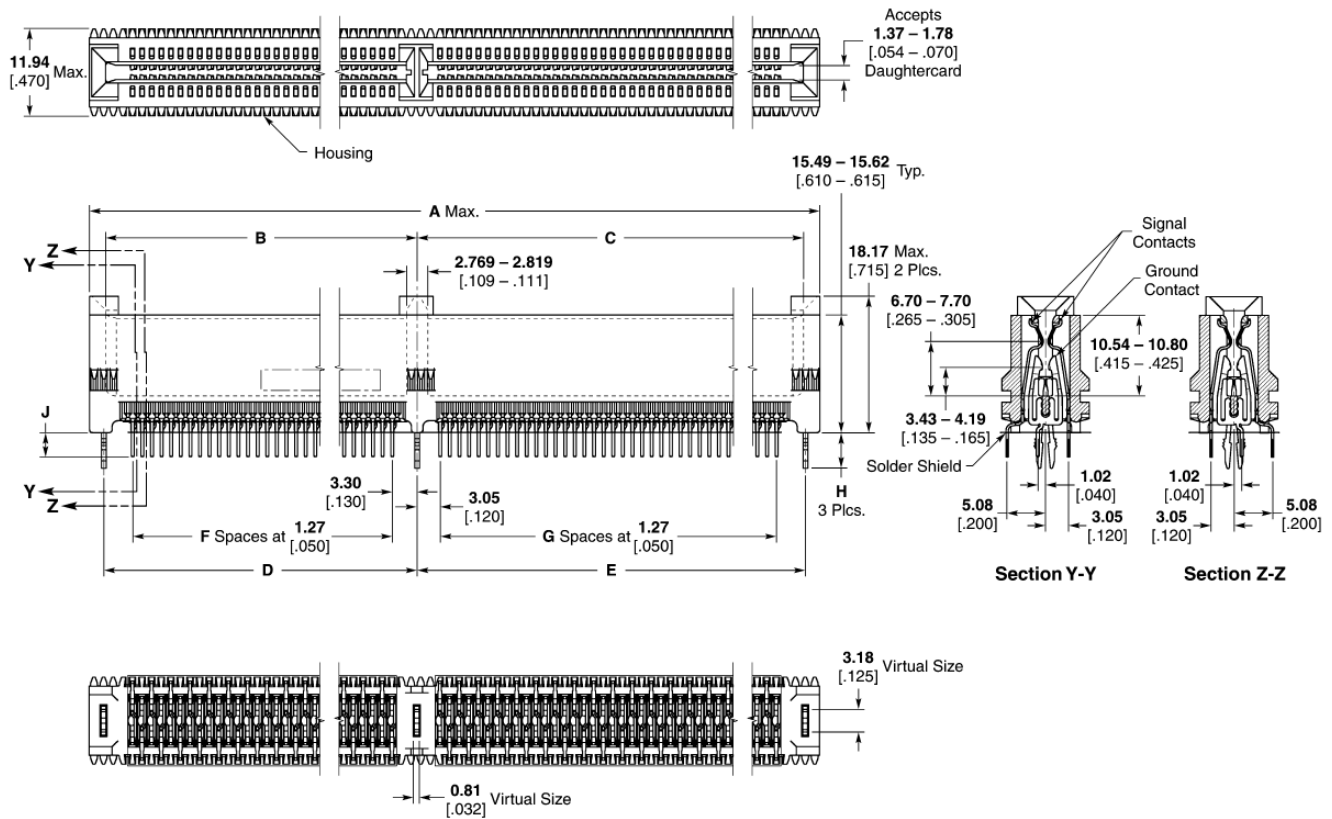
#### Application Temperature —

+215°C for 120 seconds max.

#### Operating Temperature Range —

-55°C to +85°C

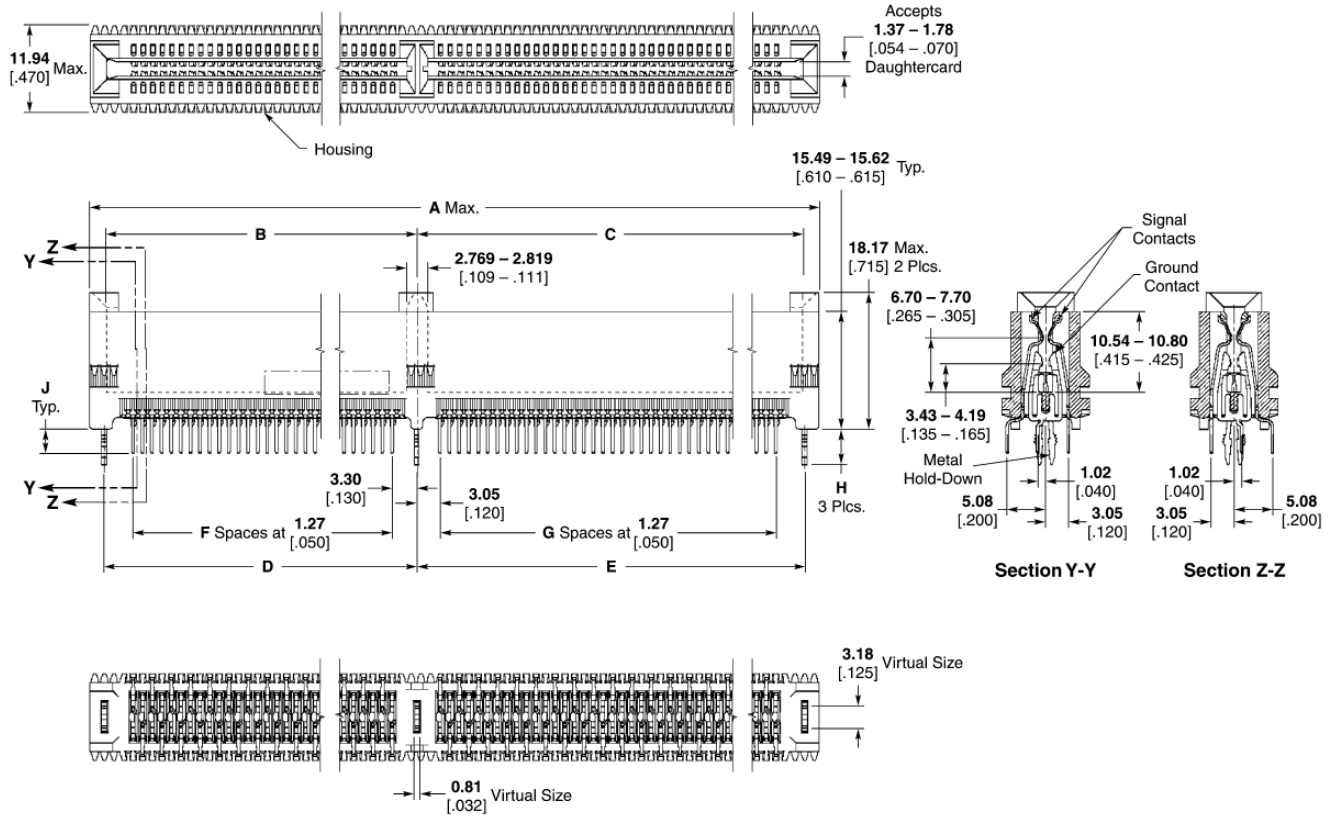
**High Speed Standard Edge Connector (Continued)**



Dimensions										No. of Dual Positions	Part Number
A	B	C	D	E	F	G	H	J			
155.35 6.116	66.42-66.68 2.615-2.625	83.95-84.20 3.305-3.315	66.73-66.88 2.627-2.633	84.25-84.40 3.317-3.323	47	61	4.44-4.95 .175-.195	2.29-2.79 .090-.110	110	5145236-1	
108.36 4.266	46.10-46.36 1.815-1.825	57.28-57.53 2.255-2.265	46.41-46.56 1.827-1.833	57.58-57.73 2.267-2.273	31	40	4.44-4.95 .175-.195	2.29-2.79 .090-.110	73	5145236-2	
155.35 6.116	66.42-66.68 2.615-2.625	83.95-84.20 3.305-3.315	66.73-66.88 2.627-2.633	84.25-84.40 3.317-3.323	47	61	4.44-4.95 .175-.195	2.92-3.43 .115-.135	110	5145236-3	

**Note:** All part numbers are RoHS compliant.

**High Speed Standard Edge Connector (Continued)**



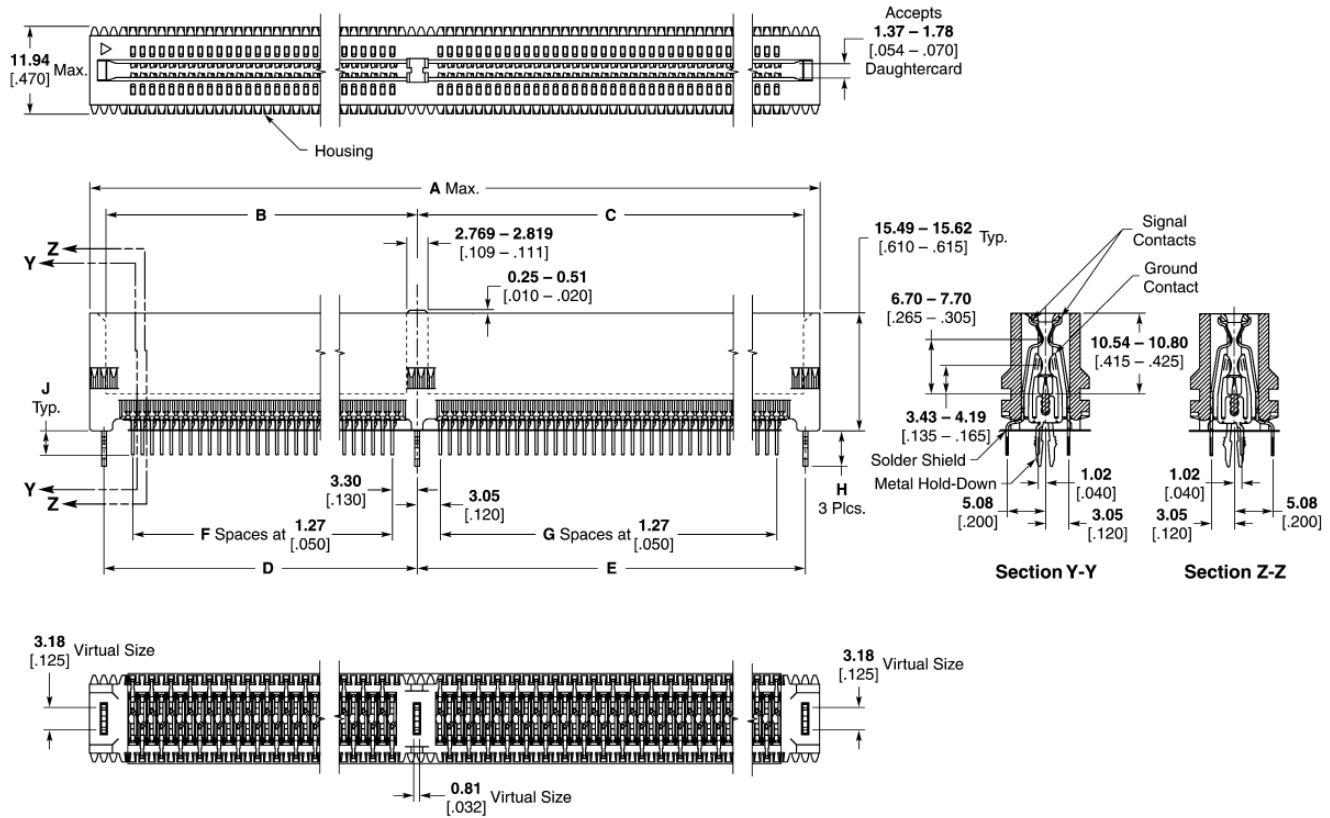
**High Speed Standard Edge Connector** (Continued)

Dimensions										No. of Dual Positions	Part Number
A	B	C	D	E	F	G	H	J			
79.15 3.116	33.40-33.66 1.315-1.325	40.77-41.02 1.605-1.615	33.71-33.66 1.327-1.333	41.07-41.22 1.617-1.623	21	27	4.44-4.95 .175-.195	2.29-2.79 .090-.110		50	5145090-1
								2.92-3.43 .115-.135		50	5145090-2
91.85 3.616	38.48-38.74 1.515-1.525	48.39-48.64 1.905-1.915	38.79-38.94 1.527-1.533	46.69-48.84 1.917-1.923	25	33	4.44-4.95 .175-.195	2.29-2.79 .090-.110		60	5145090-5
								2.92-3.43 .115-.135		60	5145090-6
								4.57-5.08 .180-.200		60	5145090-8
104.55 4.116	43.56-43.82 1.715-1.725	55.01-56.26 2.205-2.215	43.87-44.02 1.727-1.733	56.31-56.46 2.217-2.223	29	39	4.44-4.95 .175-.195	2.29-2.79 .090-.110		70	5145090-9
								2.92-3.43 .115-.135		70	1-5145090-0
117.25 4.616	51.18-51.44 2.015-2.025	61.09-61.34 2.405-2.415	51.49-51.64 2.027-2.033	61.39-61.54 2.417-2.423	35	43	4.44-4.95 .175-.195	2.29-2.79 .090-.110		80	1-5145090-3
								2.92-3.43 .115-.135		80	1-5145090-4
129.95 5.116	56.26-56.52 2.215-2.225	68.71-68.96 2.705-2.715	56.57-56.72 2.227-2.233	69.01-69.16 2.717-2.723	39	49	4.44-4.95 .175-.195	2.29-2.79 .090-.110		90	1-5145090-7
								2.92-3.43 .115-.135		90	1-5145090-8
								3.68-4.19 .145-.165		90	1-5145090-9
142.65 5.616	61.34-61.60 2.415-2.425	76.33-76.58 3.005-3.015	61.65-61.80 2.427-2.433	76.63-76.78 3.017-3.023	43	55	4.44-4.95 .175-.195	2.29-2.79 .090-.110		100	2-5145090-1
								2.92-3.43 .115-.135		100	2-5145090-2
155.35 6.116	66.42-66.68 2.615-2.625	83.95-84.20 3.305-3.315	66.73-66.88 2.627-2.633	84.25-84.40 3.317-3.323	47	61	4.44-4.95 .175-.195	2.29-2.79 .090-.110		110	2-5145090-5
								2.92-3.43 .115-.135		110	2-5145090-6
								3.68-4.19 .145-.165		110	2-5145090-7
168.05 6.616	71.50-71.76 2.815-2.825	91.57-91.82 3.605-3.615	71.81-71.96 2.827-2.833	91.87-92.02 3.617-3.623	51	67	4.44-4.95 .175-.195	2.29-2.79 .090-.110		120	2-5145090-9
								2.92-3.43 .115-.135		120	3-5145090-0
								3.68-4.19 .145-.165		120	3-5145090-1
180.75 7.116	79.12-79.38 3.115-3.125	96.65-96.90 3.805-3.815	79.43-79.58 3.127-3.133	96.95-97.10 3.817-3.823	57	71	4.44-4.95 .175-.195	2.29-2.79 .090-.110		130	3-5145090-3
								2.92-3.43 .115-.135		130	3-5145090-4
								3.68-4.19 .145-.165		130	3-5145090-5
108.36 4.266	46.10-46.36 1.815-1.825	57.28-57.53 2.255-2.265	46.41-46.56 1.827-1.833	57.58-57.73 2.267-2.273	31	40	4.44-4.95 .175-.195	2.29-2.79 .090-.110		73	3-5145090-7*
								2.92-3.43 .115-.135		73	3-5145090-8*

\*Alternate Pattern Applies.

**Note:** All part numbers are RoHS compliant.

**High Speed Standard Edge Connector (Continued)**



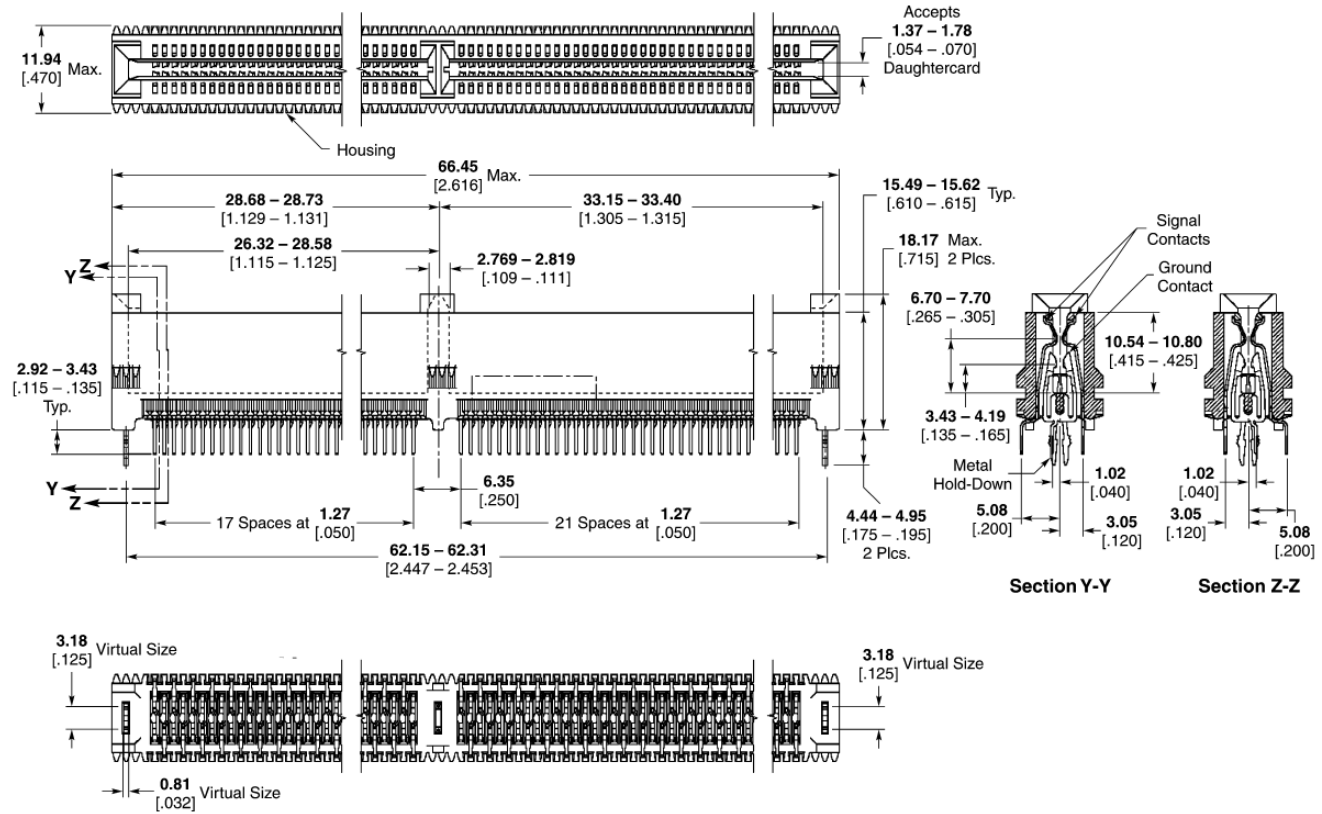
Dimensions										No. of Dual Positions	Part Number
A	B	C	D	E	F	G	H	J			
108.36	46.10-46.36	57.28-57.53	46.41-46.56	57.58-57.73	31	40	4.44-4.95	2.29-2.79		73	5145349-1
4.266	1.815-1.825	2.255-2.265	1.827-1.833	2.267-2.273			.175-.195	.090-.110			

**Note:** All part numbers are RoHS compliant.

**High Speed Standard Edge Connector (Continued)**

Part Number 5145094-6

30 Dual Positions



**Note:** All part numbers are RoHS compliant.

## SEC-Z Connector

### Product Facts

- High density card edge connector for high speed signal applications
- Used in servers, workstations, high-end PCs
  - Memory Expansion connector
  - High performance and multiple CPU interface (SPARC®, Alpha, AMD)
- 0.64 [.025] centerline density with 1.27 [.050] centerline daughtercard allowances
- High density: 80 lines/inch
- 100 cycles, min. durability
- Available in sizes from 240 position to 520 position (40 position increments)



### Active Part Numbers (additional sizes may be available)

#### 1.57 [.062] thick daughtercard

240 position	5145427-5
280 position	5145427-5
360 position	1-5145427-7
440 position	6658664-2
520 position	3-5145427-3

#### 2.36 [.093] thick daughtercard

480 position	2-5145400-9
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### Product Specification

108-1863

### Electrical Characteristics

**Crosstalk** — Less than 1% @ 200 pS, 1:1 signal/ground ratio

**Current Rating** — 1 ampere/contact

ALPHA is a trademark of Digital Equipment Corporation.

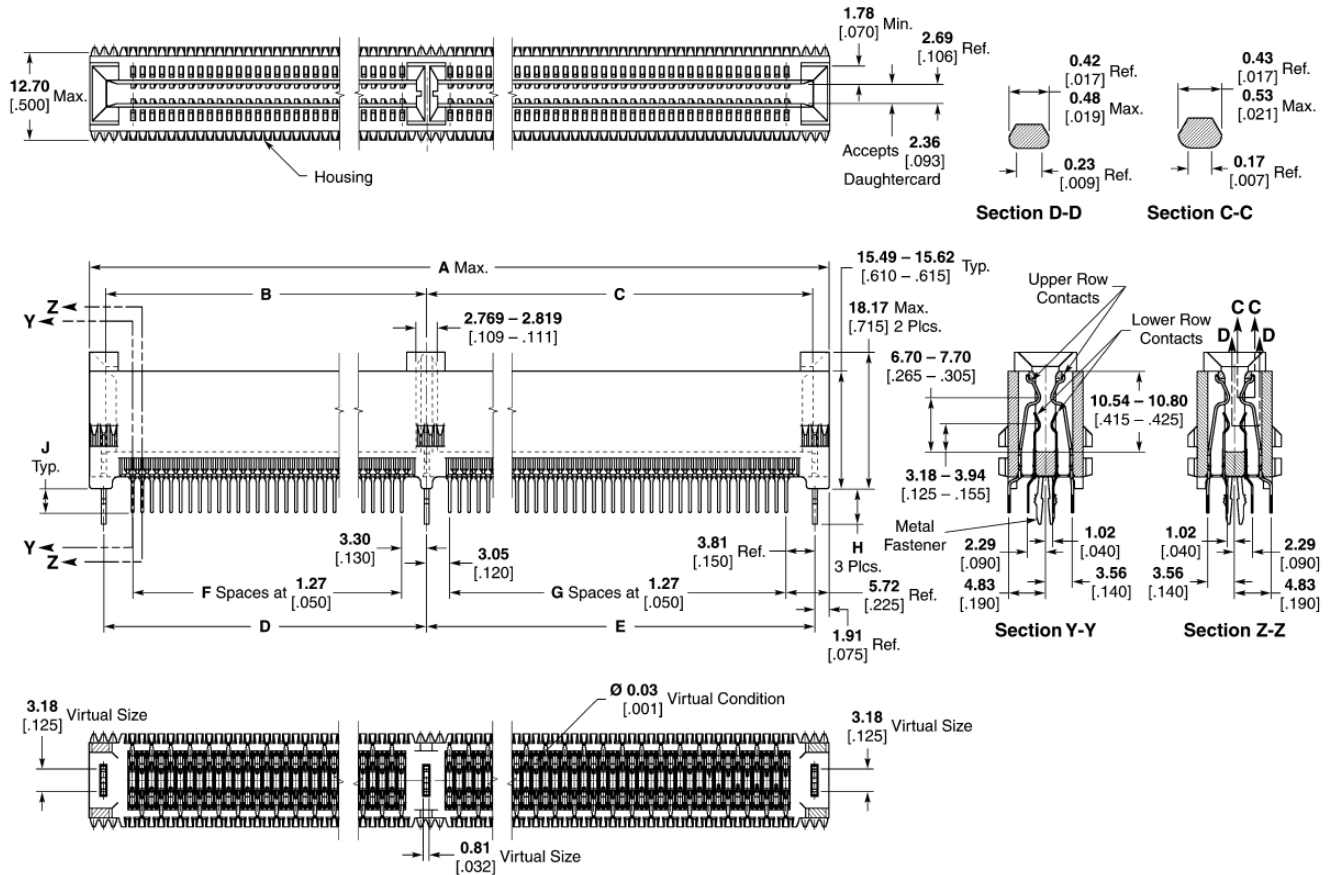
AMD is a trademark of Advanced Micro Devices, Inc.

SPARC is a trademark of SPARC International, Inc.

**Note:** All part numbers are RoHS compliant.



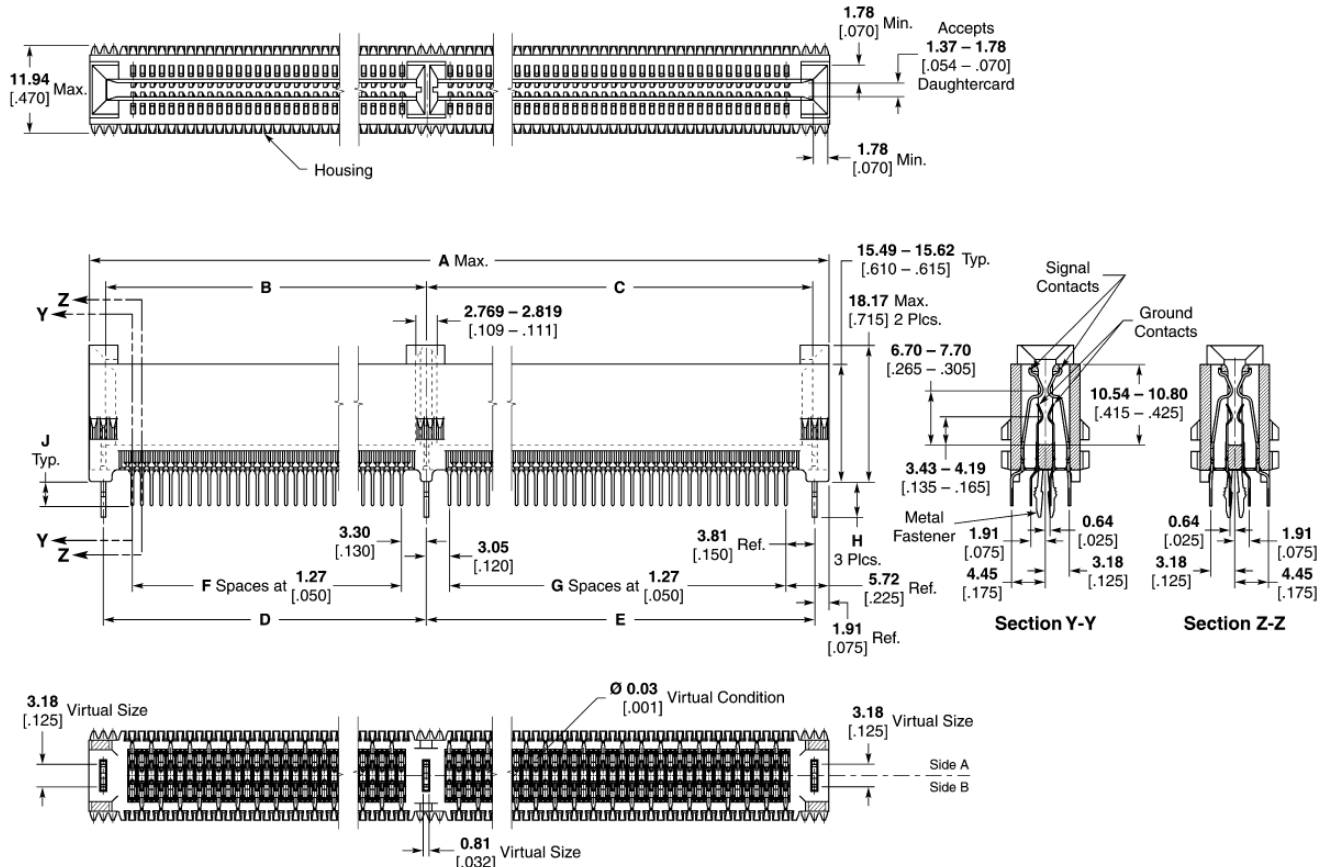
**SEC-Z Connector (Continued)**



Dimensions										No. of Total Positions	No. of Quad Positions	Part Number
A	B	C	D	E	F	G	H	J				
168.05	71.50-71.76	91.57-91.82	71.81-71.96	91.87-92.02	51	67	4.44-4.95	2.29-2.79		480	120	6-5145400-1
6.616	2.815-2.825	3.605-3.615	2.827-2.833	3.617-3.623			.175-.195	.090-.110				
47.40	18.16-18.41	24.26-24.51	18.47-18.62	24.56-24.71	9	14	4.44-4.95	2.29-2.79		100	25	2-5145400-9
1.866	.715-.725	.955-.965	.727-.733	.967-.973			.175-.195	.090-.110				

**Note:** All part numbers are RoHS compliant.

**SEC-Z Connector (Continued)**



Dimensions										No. of Total Positions	No. of Quad Positions	Part Number
A	B	C	D	E	F	G	H	J				
91.85 3.616	38.48-38.74 1.515-1.525	48.39-48.64 1.905-1.915	38.79-38.94 1.527-1.533	48.69-48.84 1.917-1.923	25	33	4.44-4.95 .175-.195	2.29-2.79 .090-.110	240	60	5145427-5	
104.55 4.116	43.56-43.82 1.715-1.725	56.01-56.26 2.205-2.215	43.87-44.02 1.727-1.733	56.31-56.46 2.217-2.223	29	39	4.44-4.95 .175-.195	2.29-2.79 .090-.110	280	70	5145427-9	
129.95 5.116	56.26-56.52 2.215-2.225	68.71-68.96 2.705-2.715	56.57-56.72 2.227-2.233	69.01-69.16 2.717-2.723	39	49	4.44-4.95 .175-.195	2.29-2.79 .090-.110	360	90	1-5145427-7	
155.35 6.116	66.42-66.68 2.615-2.625	83.95-84.20 3.305-3.315	66.73-66.88 2.627-2.633	84.25-84.40 3.317-3.323	47	61	4.44-4.95 .175-.195	2.29-2.79 .090-.110	440	110	6658664-2*	
180.75 7.116	79.12-79.38 3.115-3.125	96.65-96.90 3.805-3.815	79.43-79.58 3.127-3.133	96.95-97.10 3.817-3.823	57	71	4.44-4.95 .175-.195	2.29-2.79 .090-.110	520	130	3-5145427-3	
206.15 8.116	89.28-89.54 3.515-3.525	111.89-112.14 4.405-4.415	89.59-89.74 3.527-3.533	112.19-112.34 4.417-4.423	65	83	4.44-4.95 .175-.195	2.29-2.79 .090-.110	600	150	4-5145427-1	
237.90 9.366	103.25-103.51 4.065-4.075	129.67-129.92 5.105-5.115	103.56-103.71 4.077-4.083	129.97-130.12 5.12-5.12	76	97	4.44-4.95 .175-.195	2.29-2.79 .090-.110	700	175	5-5145427-3	

\*Contact Area Lubricated with Bellcore Approved Lubricant. Technical Reference GR-1217-Core. Issue 1, November 1995.

**Note:** All part numbers are RoHS compliant.