



COAXIAL

Power Splitter/Combiner **ZC2PD-E18673+**

50Ω 2 Way-0° 18 to 67 GHz 12 W 1.85 mm Female

THE BIG DEAL

- Wideband, 18 to 67 GHz
- Low Insertion Loss, 1.2dB typ.
- Power Handling, 12 W
- High Isolation, 30dB typ.
- Low Amplitude Unbalance, 0.1 dB typ.
- Stripline Design



Generic photo used for illustration purposes only

APPLICATIONS

- 5G Multiple-input and multiple-output (MIMO) and Back Haul Radio Systems
- long-term evolution (LTE) & 5G MIMO Infrastructure
- Satellite Communications
- Test & Measurement Equipment
- Radar, Electronic Warfare (EW), and Electronic Countermeasures (ECM) Defense Systems

Model No.	ZC2PD-E18673+
Case Style	UU2624-6
Connectors	1.85 mm Female

+RoHS Compliant
 The +Suffix identifies RoHS Compliance.
 See our website for methodologies and qualifications

PRODUCT OVERVIEW

Mini-Circuits' ZC2PD-E18673+ is a wideband 2-way 0° power splitter/combiner. It provides coverage from 18 to 67 GHz, (Ka band & V band) supporting a wide range of applications including 5G, Defense, Instrumentation and many more. This model provides 12 W power handling as a splitter and very Low Insertion Loss across the entire operating frequency range, minimizing power dissipation and delivering excellent signal power transmission from input to output. The ZC2PD-E18673+ comes housed in a case measuring 0.85 x 1.06 x 0.5" with 1.85 mm Female connectors

KEY FEATURES

Features	Advantages
Wideband, 18 to 67 GHz	Extremely wide frequency range supports many broadband applications in a single model.
Low Insertion Loss, 1.2 dB typ.	The combination of 12 W power handling and Low Insertion Loss makes this model a suitable candidate for distributing signals while maintaining excellent transmission of signal power.
High Isolation, 30 dB typ.	Minimizes interference between ports
High Power Handling: <ul style="list-style-type: none"> • 12 W as a splitter at 25°C • 0.4W as a combiner at 25°C 	The ZC2PD-E18673+ is suitable for systems with a wide range of power requirements.
Low amplitude unbalance, 0.1 dB	Produces nearly equal output signals, ideal for parallel path and multichannel systems.
DC Passing, 350 mA as a splitter	Supports applications where DC power is needed through the RF line.





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ELECTRICAL SPECIFICATIONS AT +25 °C

Parameter	Frequency (GHz)	Min.	Typ.	Max.	Units
Frequency Range	-	18	-	67	GHz
Insertion Loss (above theoretical 3.0dB per port)	18-40	-	0.9	1.7	dB
	40-50	-	1.2	2.0	
	50-67	-	1.6	2.6	
Isolation	18-40	16	29	-	dB
	40-50	16	29	-	
	50-67	16	32	-	
Phase Unbalance (±) ¹	18-40	-	1	-	Degree
	40-50	-	2	-	
	50-67	-	3	-	
Amplitude Unbalance (±) ¹	18-40	-	0.1	0.7	dB
	40-50	-	0.1	0.6	
	50-67	-	0.1	0.8	
VSWR (Port S)	18-40	-	1.23	1.7	:1
	40-50	-	1.18	1.8	
	50-67	-	1.16	1.9	
VSWR (Port 1-2)	18-40	-	1.23	1.7	:1
	40-50	-	1.16	1.8	
	50-67	-	1.12	1.9	
Power Handling	As Splitter ¹	-	-	12	W
	As Combiner ²	-	-	0.4	

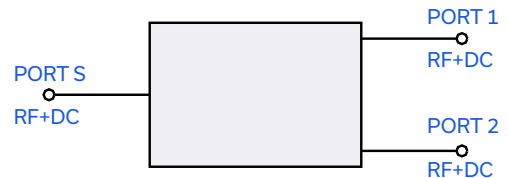
- 1. All outputs must be terminated with 50 ohm (VSWR 1.5:1 or better)
- 2. As a combiner of non-coherent signals, max. power per port is 0.2 watt

ABSOLUTE MAXIMUM RATINGS

Parameter	Ratings
Operating Case Temperature	-50 °C to +100 °C
Storage Temperature	-50 °C to +100 °C

Permanent damage may occur if any of these limits are exceeded.

FUNCTIONAL DIAGRAM





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Power Splitter/Combiner ZC2PD-E18673+

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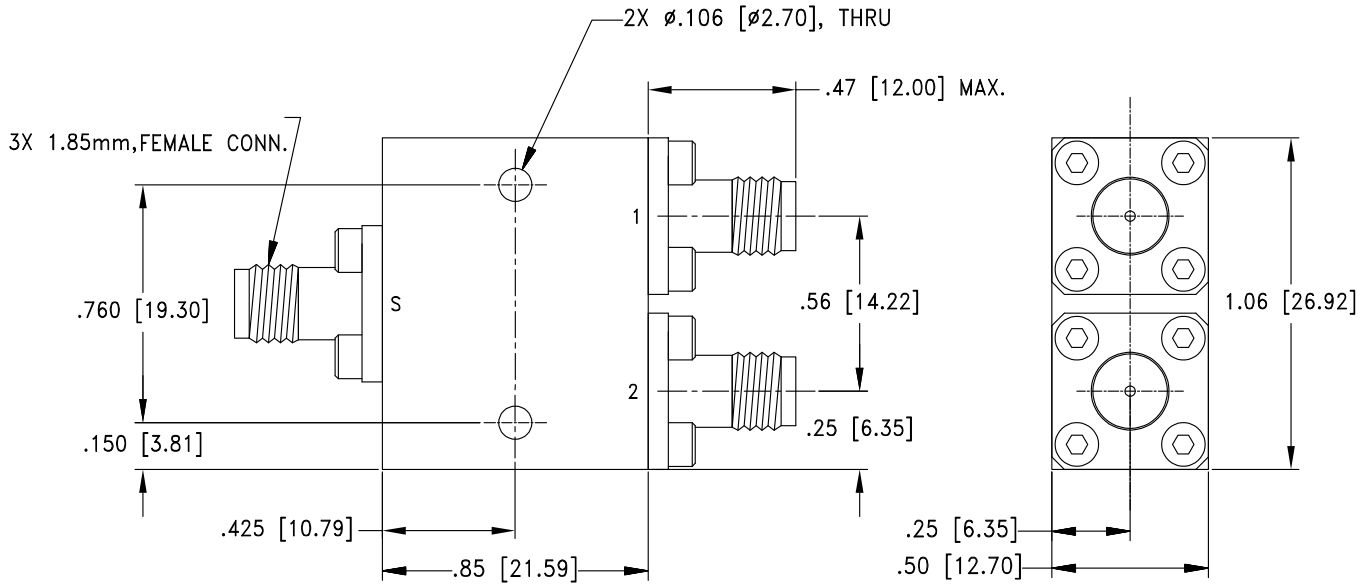
50Ω 2 Way-0° 18 to 67 GHz 12 W 1.85 mm Female

COAXIAL CONNECTIONS

Input / Output ¹	S
Output / Input ¹	1-2

1. Unit is bi-directional design.

OUTLINE DRAWING



Weight: 35 grams

Dimensions are in inches [mm]. Tolerances: 2 Pl. \pm .03; 3 Pl. \pm .015



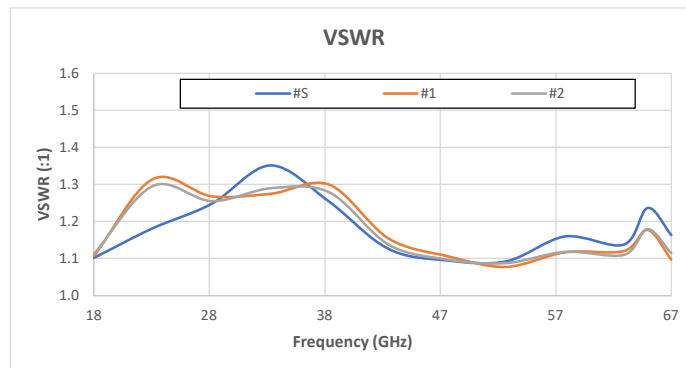
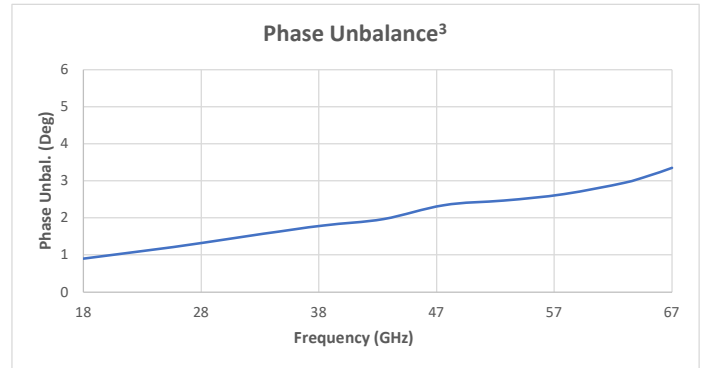
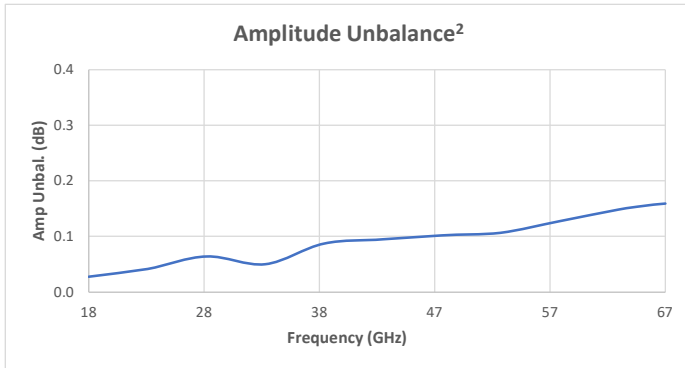
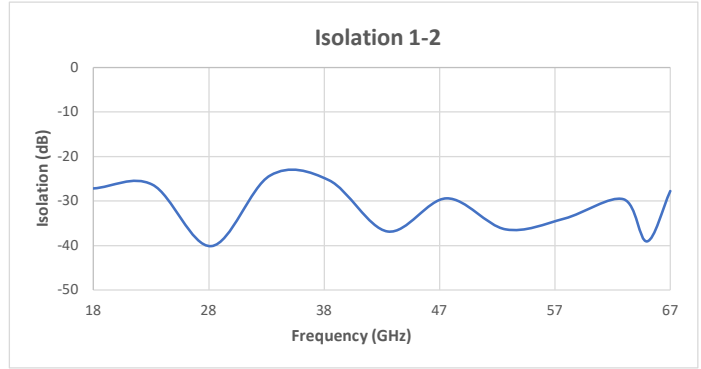
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TYPICAL PERFORMANCE CURVES



Note:

1. Insertion loss is loss above theoretical loss (3dB)
2. Amplitude unbalance is average unbalance between any ports
3. Phase unbalance is average unbalance between any ports

NOTES

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the standard terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/terms/viewterm.html



2 Way-0° Power Splitter/Combiner

ZC2PD-E18673+

Typical Performance Data

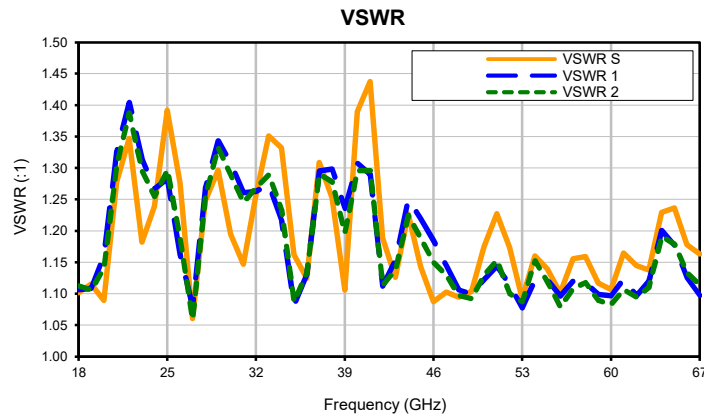
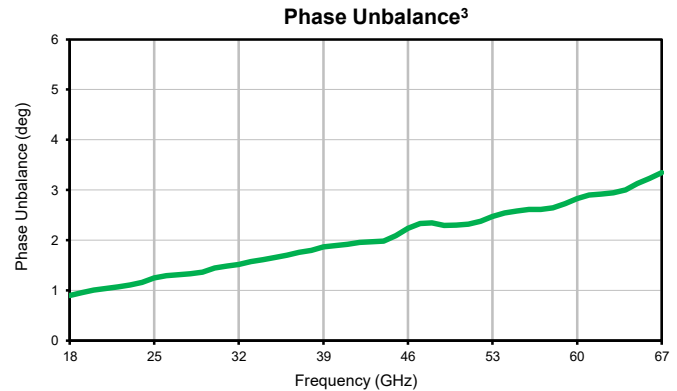
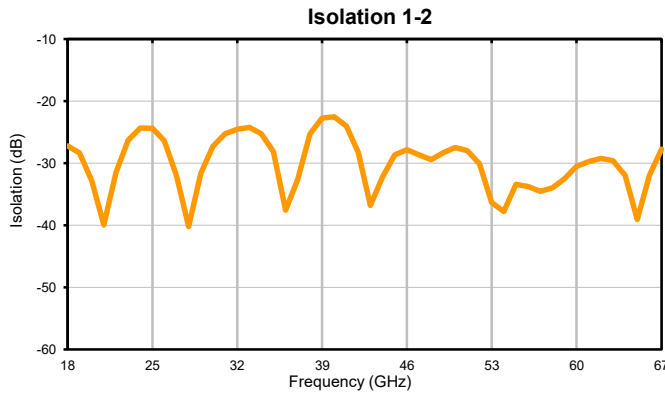
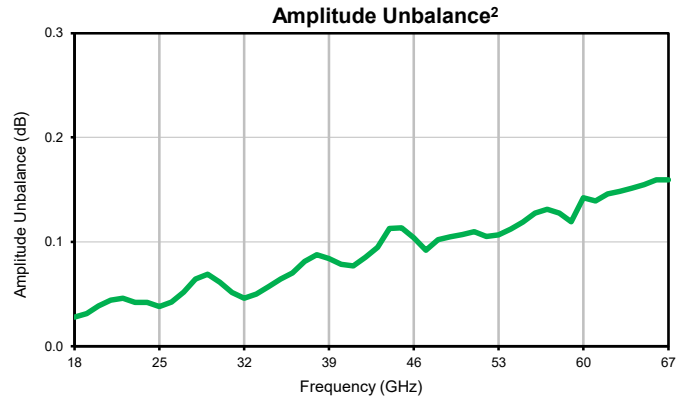
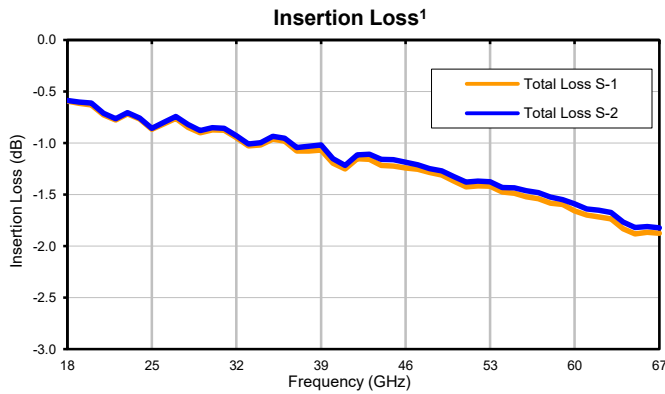
Data tested at 25DegC

FREQ. (GHz)	INSERTION LOSS ¹ (dB)		AMP. UNBAL. ² (dB)	ISOLATION (dB)	PHASE UNBAL. ³ (deg.)	VSWR (:1)		
	S-1	S-2				S	1	2
18	0.6	0.6	0.03	27	1	1.10	1.11	1.11
19	0.6	0.6	0.03	28	1	1.12	1.11	1.11
20	0.6	0.6	0.04	33	1	1.09	1.16	1.14
21	0.7	0.7	0.04	40	1	1.28	1.33	1.30
22	0.8	0.8	0.05	32	1	1.35	1.40	1.39
23	0.7	0.7	0.04	26	1	1.18	1.31	1.30
24	0.8	0.8	0.04	24	1	1.24	1.27	1.25
25	0.9	0.9	0.04	24	1	1.39	1.28	1.30
26	0.8	0.8	0.04	26	1	1.28	1.16	1.19
27	0.8	0.7	0.05	32	1	1.06	1.08	1.06
28	0.8	0.8	0.06	40	1	1.25	1.27	1.26
29	0.9	0.9	0.07	32	1	1.30	1.34	1.33
30	0.9	0.9	0.06	27	1	1.19	1.31	1.29
31	0.9	0.9	0.05	25	1	1.15	1.26	1.25
32	0.9	0.9	0.05	25	2	1.26	1.26	1.27
33	1.0	1.0	0.05	24	2	1.35	1.27	1.29
34	1.0	1.0	0.06	25	2	1.33	1.22	1.23
35	1.0	0.9	0.06	28	2	1.16	1.08	1.09
36	1.0	1.0	0.07	38	2	1.12	1.13	1.13
37	1.1	1.0	0.08	33	2	1.31	1.30	1.29
38	1.1	1.0	0.09	25	2	1.25	1.30	1.28
39	1.1	1.0	0.08	23	2	1.11	1.24	1.20
40	1.2	1.2	0.08	23	2	1.39	1.31	1.30
41	1.3	1.2	0.08	24	2	1.44	1.29	1.30
42	1.2	1.1	0.09	28	2	1.19	1.11	1.11
43	1.2	1.1	0.09	37	2	1.13	1.15	1.14
44	1.2	1.2	0.11	32	2	1.23	1.25	1.22
45	1.2	1.2	0.11	29	2	1.14	1.22	1.19
46	1.2	1.2	0.10	28	2	1.09	1.18	1.15
47	1.3	1.2	0.09	29	2	1.10	1.14	1.13
48	1.3	1.2	0.10	29	2	1.09	1.11	1.10
49	1.3	1.3	0.10	28	2	1.10	1.10	1.09
50	1.4	1.3	0.11	28	2	1.17	1.12	1.13
51	1.4	1.4	0.11	28	2	1.23	1.14	1.15
52	1.4	1.4	0.11	30	2	1.17	1.11	1.10
53	1.4	1.4	0.11	36	2	1.09	1.08	1.09
54	1.5	1.4	0.11	38	3	1.16	1.12	1.15
55	1.5	1.4	0.12	33	3	1.14	1.12	1.12
56	1.5	1.5	0.13	34	3	1.10	1.10	1.08
57	1.5	1.5	0.13	35	3	1.16	1.12	1.11
58	1.6	1.5	0.13	34	3	1.16	1.12	1.12
59	1.6	1.6	0.12	33	3	1.12	1.10	1.09
60	1.7	1.6	0.14	31	3	1.11	1.10	1.08
61	1.7	1.6	0.14	30	3	1.16	1.12	1.11
62	1.7	1.7	0.15	29	3	1.14	1.10	1.10
63	1.7	1.7	0.15	30	3	1.14	1.12	1.11
64	1.8	1.8	0.15	32	3	1.23	1.20	1.19
65	1.9	1.8	0.15	39	3	1.24	1.18	1.18
66	1.9	1.8	0.16	32	3	1.18	1.13	1.13
67	1.9	1.8	0.16	28	3	1.16	1.10	1.11

1. Insertion loss is loss above theoretical loss (3dB)
2. Amplitude unbalance is average unbalance between any ports
3. Phase unbalance is average unbalance between any ports

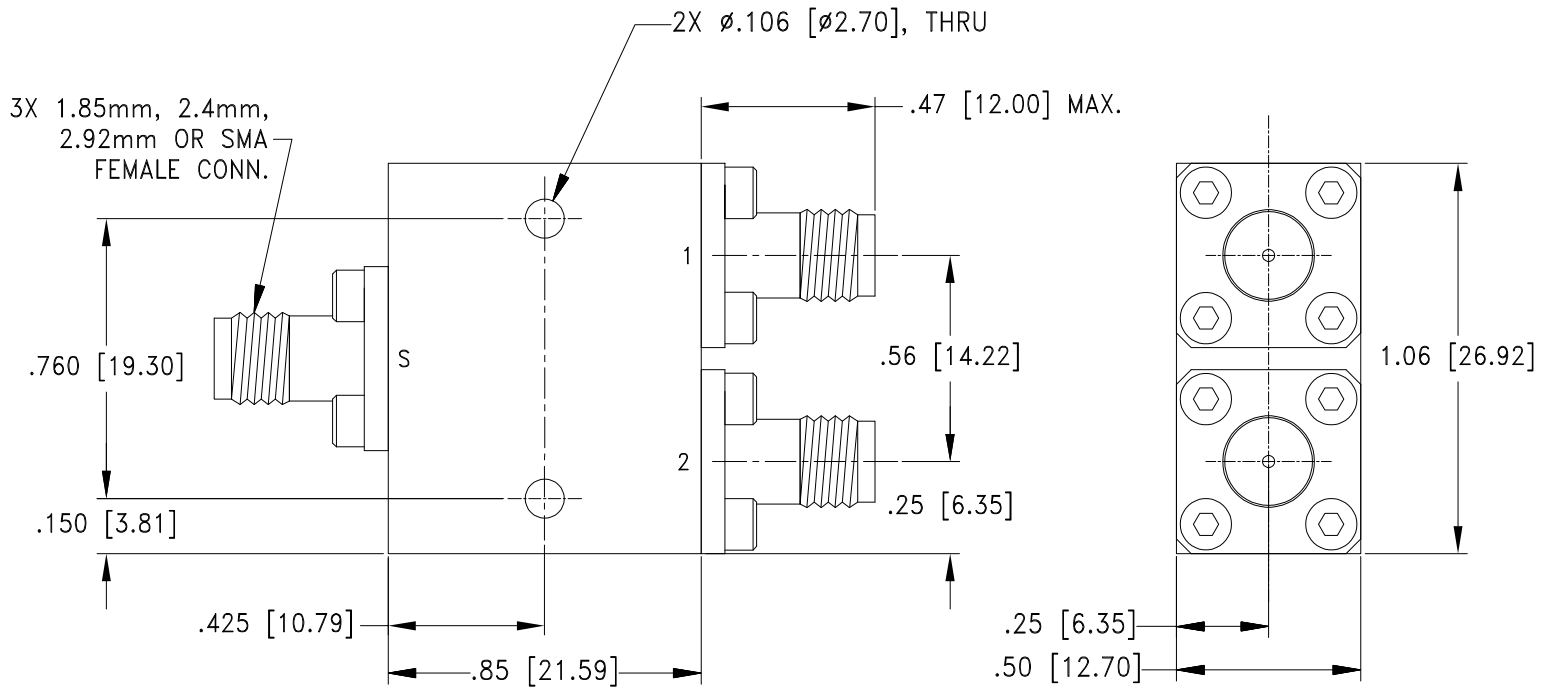


Typical Performance Curves



Note:

1. Insertion loss is loss above theoretical loss (3dB)
2. Amplitude unbalance is average unbalance between any ports
3. Phase unbalance is average unbalance between any ports



Weight: 35 grams.

Dimensions are in inches (mm). Tolerances: 2 Pl. \pm .03; 3 Pl. \pm .015

Notes:

1. Case Material: Aluminum Alloy
2. Case Finish:

For RoHS Case Styles: Nickel Plating.

Mini-Circuits®
ISO 9001 ISO 14001 CERTIFIED

ALL NEW
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RF/IF MICROWAVE COMPONENTS



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-55° to 100°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Thermal Shock	-55° to 100°C, 100 cycles	MIL-STD-202, Method 107, Condition A-3, except +100°C
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition I