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PRODUCT SPECIFICATION S6020C Revision 0.4

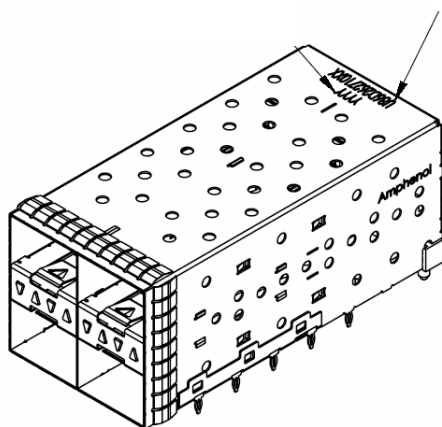
Product Specification for a Stacked SFP Expressport interconnect system

Overview

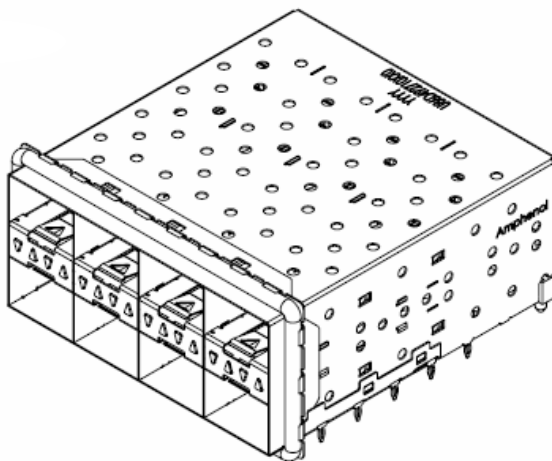
This short form product specification defines the general usage and performance requirements for Amphenol's U86 series 2XN connector and cage combos.

The interconnect system comprises of a SFP transceiver connector and cage assembly as one unit with all press-fit pin construction.

Availability: 2X2, 2X4 and 2X6 combos in development. 2X1 will be available July 2009.



2X2 connector and cage
with EMI spring fingers



2X4 connector and cage
with elastomeric gaskets.

6/16/2009

Usage

Designed to handle data rates to 10 Gbps and beyond
Industry-compatible mating module

Applications:

- Network switches
- Routers
- Servers
- Telecommunications
- Storage devices

General Requirements

- RoHS compliant
- Press fit cage and connector combo for minimum $1.57 \pm 10\%$ mm (0.0625") PCB thickness
- Combos are tray packaging
- Dust cover for front face is available (bulk packed)
- Temperature rating -55 C° to 85 C°
- Industry standard EIA-364

Mechanical Characteristics

2XN 20-position, 0.8mm pitch press fit termination receptacle

Card entry slot accepts 1.0mm-thick integrated circuit cards.

Accepts multiple transceivers per INF-8074i

Durability of 250 mating cycles for 30 micro-inches gold versions.

Connectors shall be of the design, construction and physical dimensions specified on the applicable product drawings.

Electrical Characteristics

Hot swappable

Allows module swapping

Operating voltage 30V AC at 0.5A maximum

Cages include spring contacts for superior EMI grounding

Contact resistance 70 mΩ max

Insulation resistance 1000MΩ minimum

DWV 300V DC for 60 seconds

Differential impedance 100Ω +/-10Ω

Common mode impedance 25Ω

Differential insertion loss -0.5dB (0.25 to 5 Ghz) and $-0.5-5.77 \cdot \log(f/5\text{GHz})$ dB (5.0 to 15GHz)

Differential return loss -15dB (.25 to 5Ghz) $-15+30 \cdot \log(f/5\text{GHz})$ dB (5.0 to 11.1 Ghz)

[Compliant with SFF-8083]

Material Requirements

Unless otherwise specified, the materials for each component shall be:

- Electrical connector chicklets
 - Contact area to have 15μ" and 30μ" gold option over 50μ" nickel on mating area
 - Press fit termination to have 100-300μ" tin-lead over 50μ" nickel
 - Molding body LCP
- Housings: Glass-reinforced, thermoplastic, UL 94 V-0 rated
- Cage: Copper alloy, nickel plating
- Spring clip: Copper alloy, nickel plating
- Optional thermoplastic dust covers.

Temperature Rating

- Operating Temperature = -55°C to +85°C
- Storage Temperature = -55°C to +105°C

Assembly tool

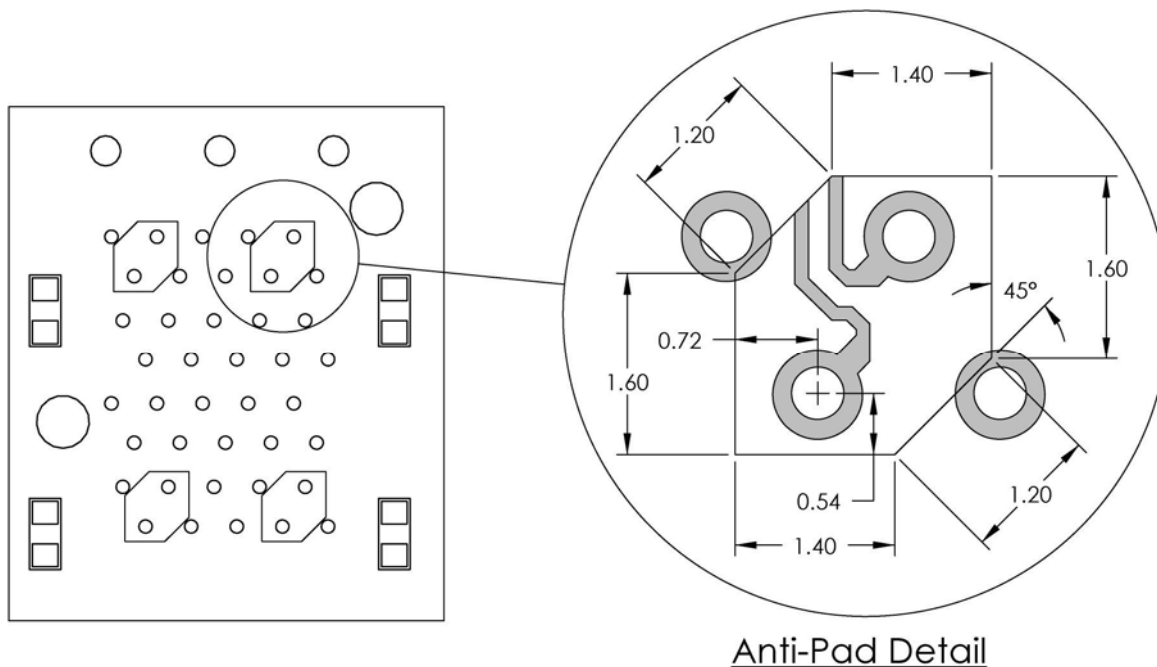
Insertion and extraction tools available.(consult factory)

The maximum insertion force for 2X1 combo shall not exceed 1000 N.

Assembly on PCB




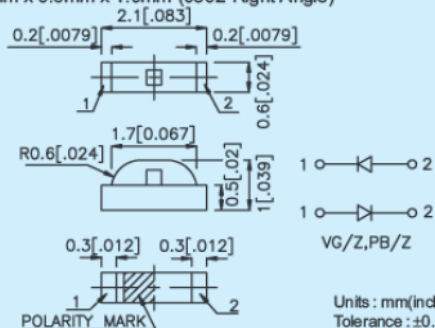
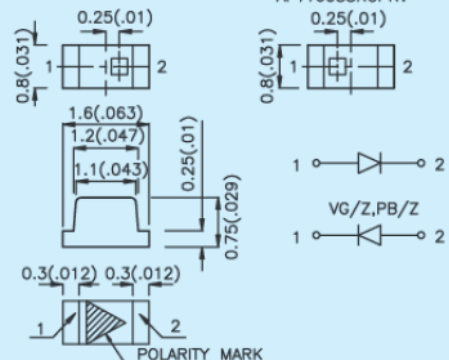
- 1000 N maximum insertion force for 2X1 combo
- Proper support for connector and cage required during insertion into PCB
- Extraction tool required for removing the combo from PCB (consult factory)

Antipad recommendations:



LED's

Recommended LED package size options are shown below:

Kingbright		SURFACE MOUNT LED LAMPS						
APA2106		APT1608					APT2012	
								
Part No.	Material	λ D (nm)	Lens Type	Iv (mcd) @20mA		Viewing Angle 2 θ 1/2	Dimension	
				Min.	Typ.			
APA2106SURCK	InGaAlP	635	water clear	110	250	120°	 Units : mm(inch) Tolerance : $\pm 0.1(0.004)$	
APA2106SECK	InGaAlP	601	water clear	70	250	120°		
APA2106SYCK	InGaAlP	590	water clear	50	150	120°		
APA2106MGC	InGaAlP	568	water clear	36	80	120°		
APA2106CGCK	InGaAlP	570	water clear	18	60	120°		
APA2106ZGC	AlInGaN	525	water clear	70	250	120°		
APA2106VGC/A	InGaN	525	water clear	70	180	120°		
APA2106VGC/Z	InGaN	535	water clear	380	800	120°		
APA2106QBC/D	AlInGaN	470	water clear	36	90	120°		
APA2106PBC/A	InGaN	470	water clear	18	60	120°		
APA2106PBC/Z	InGaN	465	water clear	110	200	120°		
APT1608EC	GaAsP/GaP	625	water clear	4	12	120°	 Units : mm(inch) Tolerance : $\pm 0.1(0.004)$	
APT1608SRCPRV	GaAlAs	640	water clear	36	100	120°		
APT1608SURCK	InGaAlP	635	water clear	50	150	120°		
APT1608SECK	InGaAlP	601	water clear	50	160	120°		
APT1608YC	GaAsP/GaP	588	water clear	2.6	8	120°		
APT1608SYCK	InGaAlP	590	water clear	36	120	120°		
APT1608SGC	GaP	568	water clear	4	15	120°		
APT1608MGC	InGaAlP	568	water clear	18	70	120°		
APT1608CGCK	InGaAlP	570	water clear	10	40	120°		
APT1608ZGC	AlInGaN	525	water clear	110	300	120°		
APT1608VGC/A	InGaN	525	water clear	50	180	120°		
APT1608VGC/Z	InGaN	535	water clear	380	800	120°		
APT1608QBC/D	AlInGaN	470	water clear	50	100	120°		
APT1608PBC/A	InGaN	470	water clear	18	60	120°		
APT1608PBC/Z	InGaN	465	water clear	110	200	120°		
APT1608RWF/A	InGaN	-	yellow fluorescent	70	140	120°		
				X=0.31, Y=0.31				
APT1608MBC	InGaN	466	water clear	4	10	120°		

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APT2012EC	GaAsP/GaP	625	water clear	4	12	120°	2.0mm x 1.25mm x 0.75mm (0805 Super Thin)
APT2012SRCPRV	GaAlAs	640	water clear	36	100	120°	
APT2012SURCK	InGaAlP	635	water clear	50	150	120°	
APT2012SECK	InGaAlP	601	water clear	50	160	120°	
APT2012YC	GaAsP/GaP	588	water clear	2.6	8	120°	
APT2012SYCK	InGaAlP	590	water clear	36	120	120°	
APT2012SGC	GaP	568	water clear	4	15	120°	
APT2012MGC	InGaAlP	568	water clear	18	70	120°	
APT2012CGCK	InGaAlP	570	water clear	10	40	120°	
APT2012ZGC	AlInGaP	525	water clear	110	300	120°	
APT2012VGC/A	InGaP	525	water clear	50	180	120°	
APT2012VGC/Z	InGaP	535	water clear	380	800	120°	
APT2012QBC/D	AlInGaP	470	water clear	50	100	120°	
APT2012PBC/A	InGaP	470	water clear	18	60	120°	
APT2012PBC/Z	InGaP	465	water clear	110	200	120°	
APT2012RWF/A	InGaP	-	yellow fluorescent	70	140	120°	
				X=0.31,Y=0.31			
APT2012MBC	GaN	466	water clear	4	10	120°	

APT2012SRCPRV POLARITY MARK

1.25(.049) 0.13(.005) 2(.079) 1.3(.051) 0.25(.01) 0.75(.029) 0.4(.016) 0.4(.016)

1 2

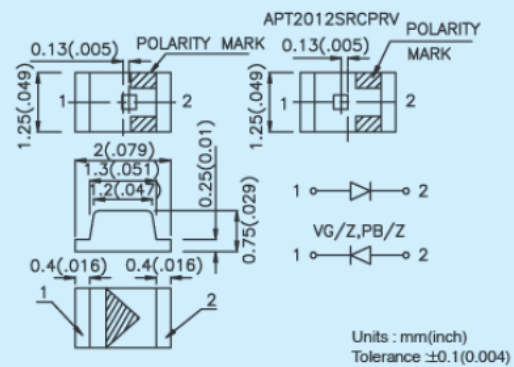
1 2

VG/Z, PB/Z

1 2

Units : mm(inch)

Tolerance ±0.1(0.004)



Packaging

- Tray packaging for the combo (connector and cage)
- Bulk packaged Amphenol Canada labeled bags with date code for dust covers