

PULSEJACK™

Surface Mount 1x1



Description:

10/100Base-TX surface mount RJ45 single port (1x1) Tab-UP/DOWN with or without LEDs Integrated Magnetics Connector, designed to support applications such as: Set Top Box and Network Interface Cards (NIC).



Features and Benefits:

- Peak solder temperature rating per Table 5-2 in IPC/JEDEC J-STD-020C
- For RoHS part, add suffix **NL**³
- J0C SMT product, reduced size and low cost alternative to JV series

Electrical Performance Summary:

- Meets IEEE 802.3 specification
- High performance for maximum EMI suppression

Electrical Specifications @ 25°C — Operating Temperature 0°C to +70°C

Part ² Number	RoHS ³	Turns Ratios		Tab Option Up/Down	LEDs ¹ L/R	BST Circuit	EMI Finger	Insertion Loss TX/RX (dB MAX)	Return Loss (dB MIN) 100Ω (±15Ω)				Crosstalk (dB MIN)			Common Mode Rejection (dB MIN)		Hipot (Vrms) (MIN)
		TX	RX					1-65 MHz	1-10 MHz	30 MHz	60-80 MHz	1-10 MHz	30-60 MHz	60-100 MHz	1-50 MHz	50-130 MHz	@60 Hz 1 MIN	
J0C-0003	NL	1CT:1	1CT:1	Down	No	No	No	-1.0	-18	-14	-10	-35	-35	-30	-20	-20	1500	
J0C-0004	NL	1CT:1	1CT:1	Down	No	No	Yes	-1.0	-18	-14	-10	-35	-35	-30	-20	-20	1500	
J0C-0005	NL	1CT:1	1CT:1	Down	No	Yes	No	-1.0	-18	-14	-10	-35	-35	-30	-20	-20	1500	
J0C-0006	NL	1CT:1	1CT:1	Down	No	Yes	Yes	-1.0	-18	-14	-10	-35	-35	-30	-20	-20	1500	
JV006I21	NL	1CT:1	1CT:1	Down	No	No	Yes	-1.0	-20	-16	-12	-40	-35	-30	-30	-20	1500	
JV011I21	NL	1CT:1	1CT:1	Down	No	Yes	Yes	-1.0	-20	-16	-12	-40	-35	-30	-30	-20	1500	
JV026I21	NL	1CTS:1	1CT:1	Down	No	Yes	Yes	-1.0	-20	-16	-12	-40	-35	-30	-30	-20	1500	
J3006G21D	⁴	1CT:1	1CT:1	Up	G/Y	No	Yes	-1.0	-20	-16	-12	-40	-35	-30	-30	-20	1500	
J3011G21D	NL	1CT:1	1CT:1	Up	G/Y	Yes	Yes	-1.0	-20	-16	-12	-40	-35	-30	-30	-20	1500	
J3018G21K	⁴	1CTS:1.414	1CT:1	Up	G/G	Yes	Yes	-1.0	-20	-16	-11.5	-40	-35	-30	-30	-20	1500	
J3026G01D	⁴	1CTS:1	1CT:1	Up	G/Y	Yes	No	-1.0	-20	-16	-12	-40	-35	-30	-30	-20	1500	
J3026G21D	⁴	1CTS:1	1CT:1	Up	G/Y	Yes	Yes	-1.0	-20	-16	-12	-40	-35	-30	-30	-20	1500	

Notes: 1. LEDs Left/Right: **G** = green; **Y** = yellow.

2. Add suffix "**T**" for Tape & Reel option (e.g. J0C-0004T).

3. Add suffix "**NL**" for RoHS compliant parts (e.g. J0C-0004 changes to J0C-0004NL, or J0C-0004NLT for Tape & Reel option).

4. Contact Pulse for RoHS compliant part availability.

RJ45 Durability Testing Rating

Part Number	Mating Force (MAX)	Unmating Force (MAX)	Durability	Plug to Jack Retention (MIN)
J0C/JV/J3 Series	5 lbs./2.268 kgs.	5 lbs./2.268 kgs.	750 Insertions	20 lbs./9.072 kgs.

RJ45 Material Specification

Part Number	Shield		Contact			Housing		MSL ² Rating
	Material	Finish	Material	Plating Area	Solder Area ⁴	Material	Specification	
J0C/JV/J3 Series	Brass	20-40μ inches thick nickel over Brass	Phosphor Bronze	15μ inches gold over 30-80μ inches nickel	75-300μ inches tin-lead over 30-80μ inches nickel	High Temp. Thermoplastic	UL 94 V-0	¹

Notes: 1. Connector dimensions comply with FCC part 68 dimension requirements.

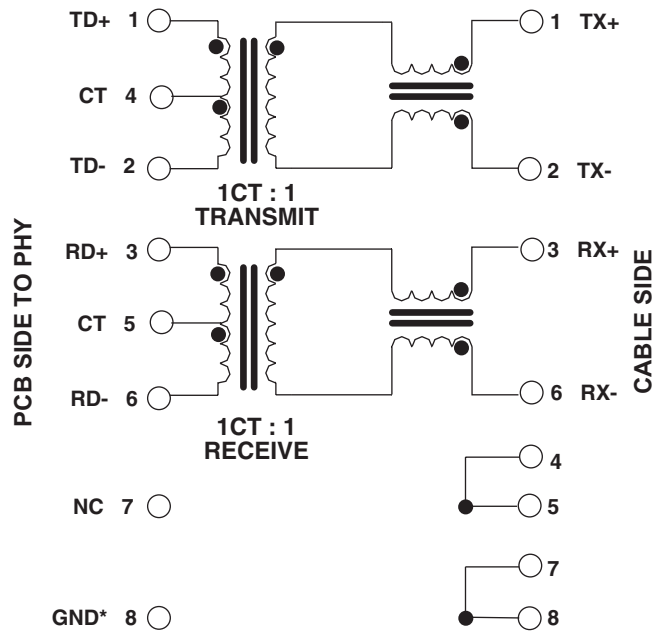
2. MSL = Moisture Sensitivity Level rating: 1 to 5 (highest rating = 1, lowest rating = 5).

3. The MSL rating for J0C-000X is Level 4. All other connectors are Level 1.

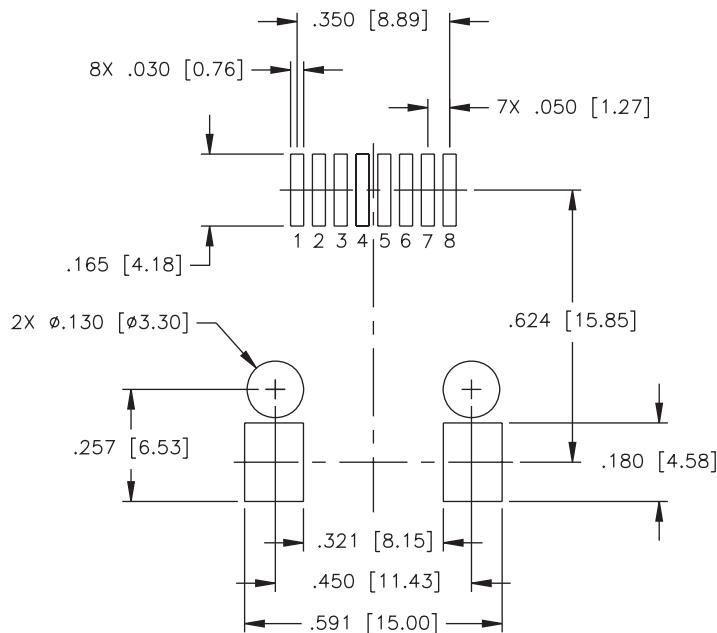
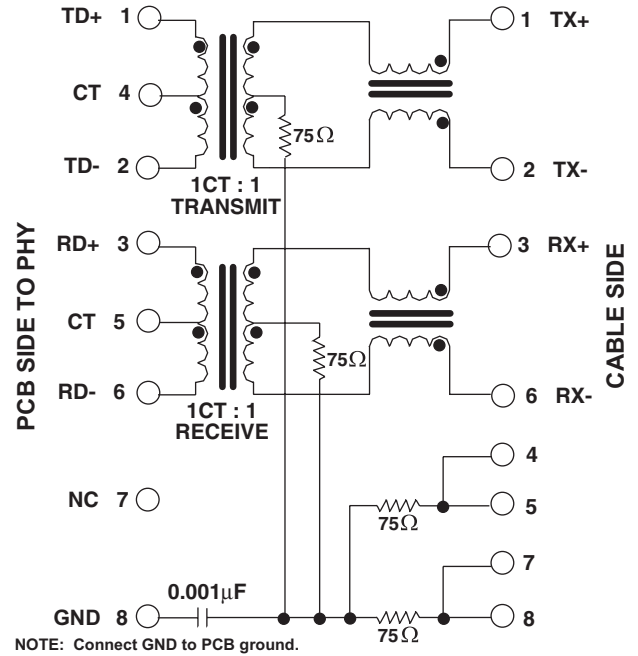
4. NL parts are tin matte finish over nickel.

J0C Platform Schematics

J0C-0003/4



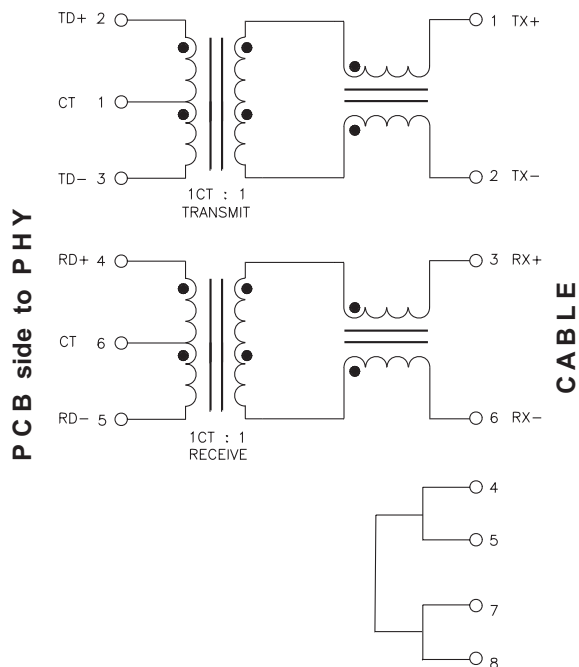
J0C-0005/6



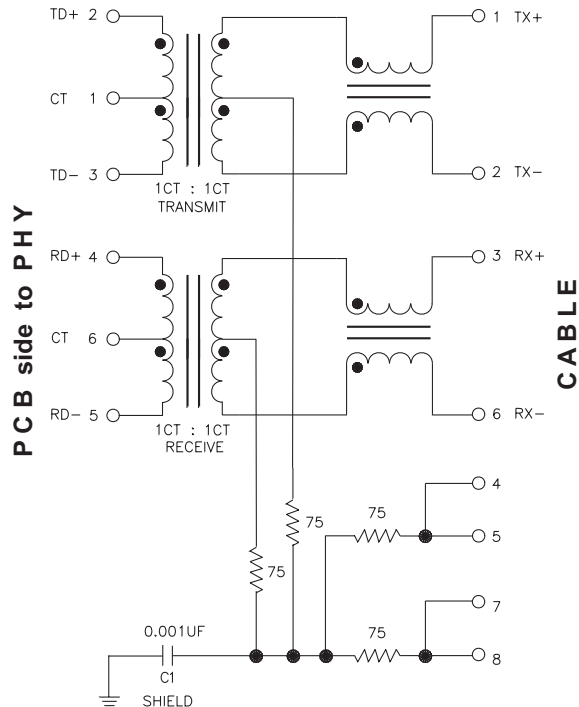
SUGGESTED FOOTPRINT (COMPONENT SIDE SHOWN)
DIMENSIONAL TOLERANCE: (UNLESS OTHERWISE SPECIFIED)
.XXX ±.003 [X.XX ±0.08]

JV Platform Schematics

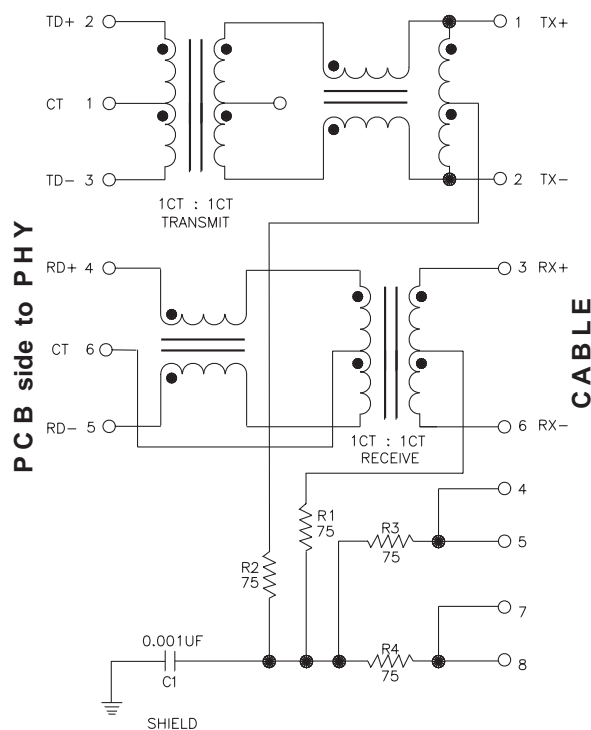
JV006



JV011

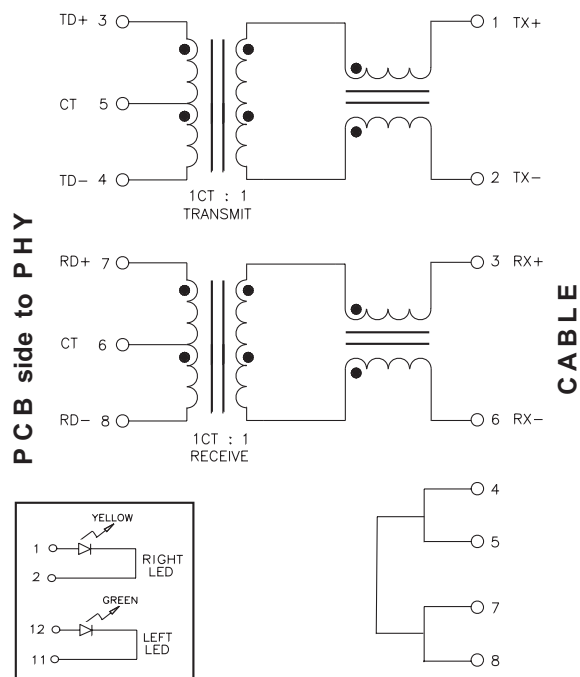


JV026

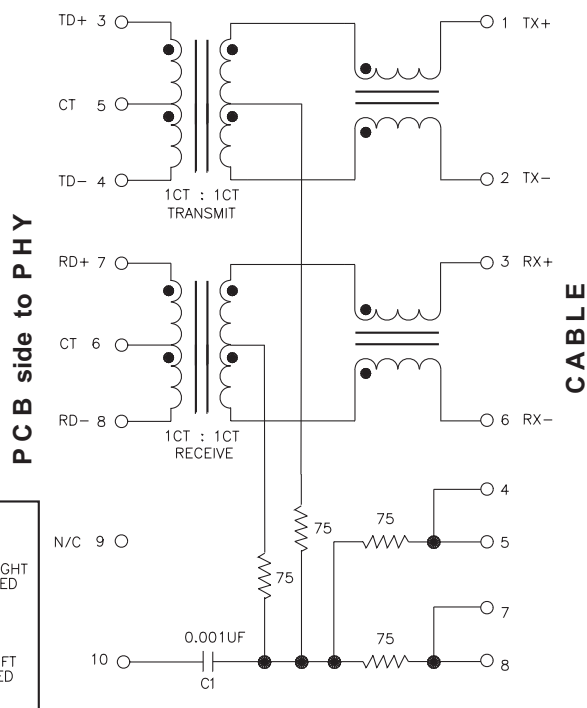


J3 Platform Schematics

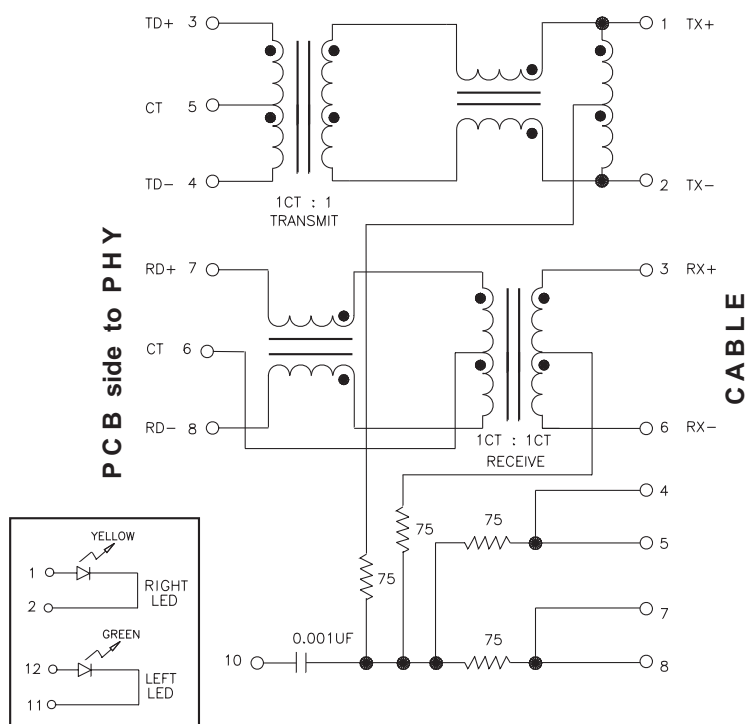
J3006



J3011

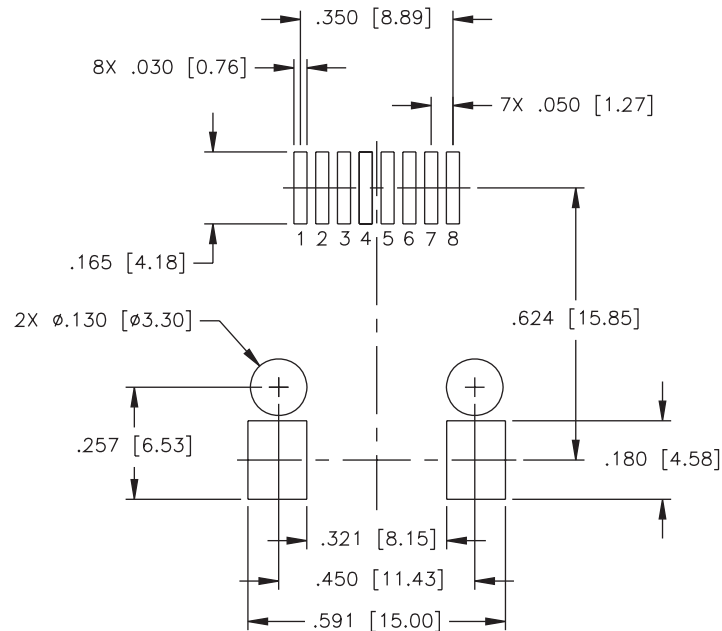
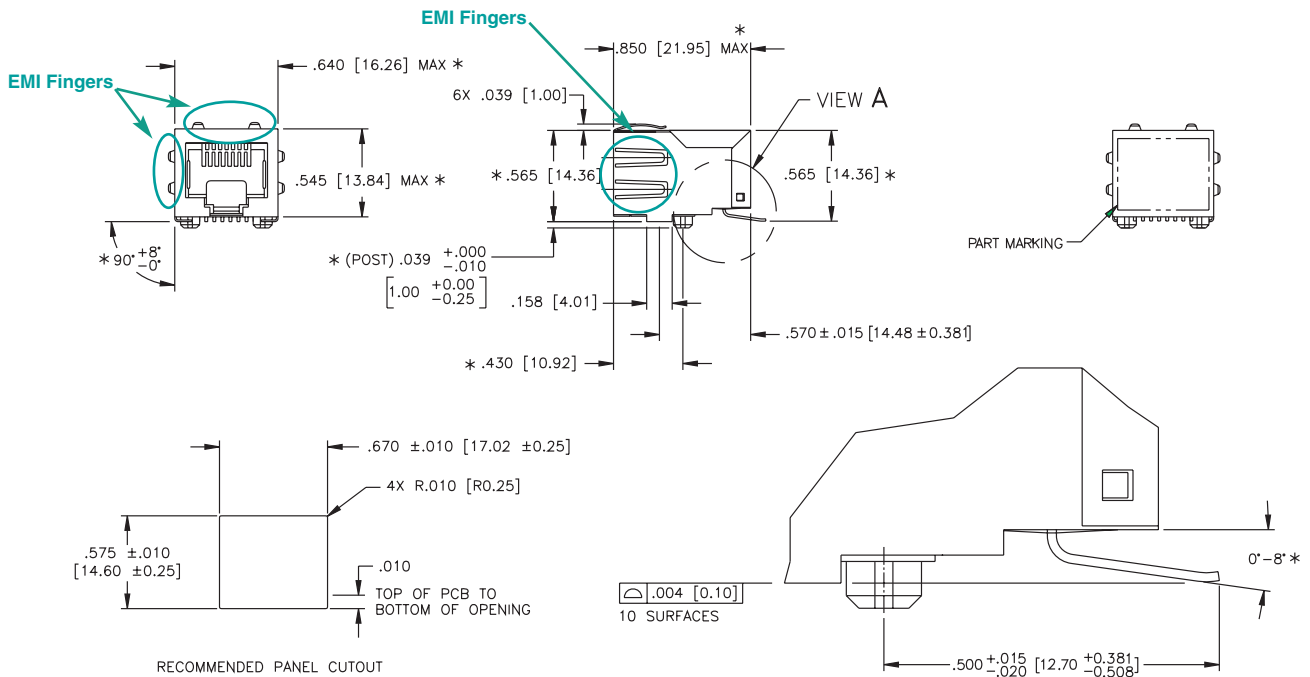


J3018/J3026



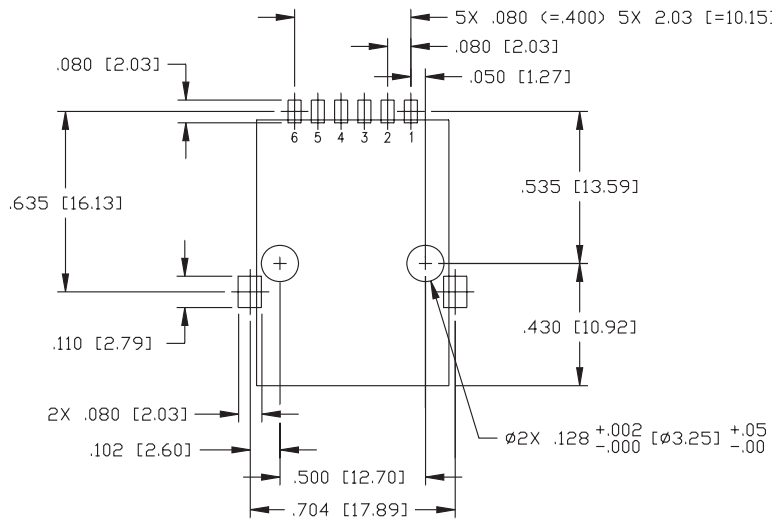
J0C Platform Mechanicals

J0C-0004/6 (J0C-0003/5 - Same platform without EMI Fingers)



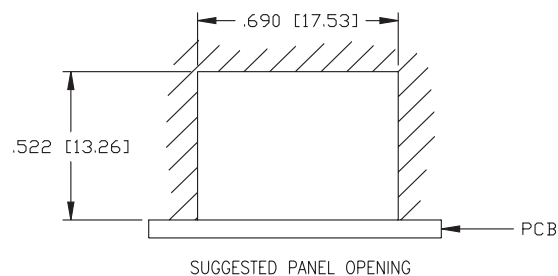
SUGGESTED FOOTPRINT (COMPONENT SIDE SHOWN)
 DIMENSIONAL TOLERANCE: (UNLESS OTHERWISE SPECIFIED)
 .XXX $\pm .003$ [X.XX ± 0.08]

JV Series



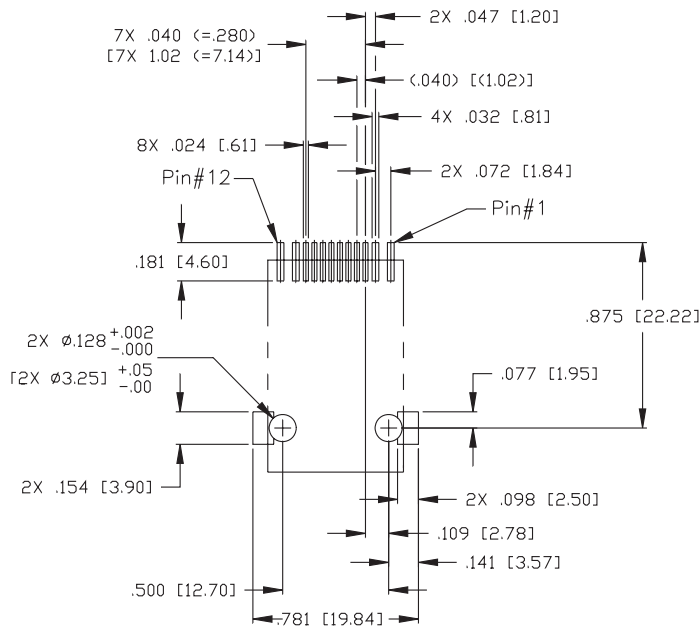
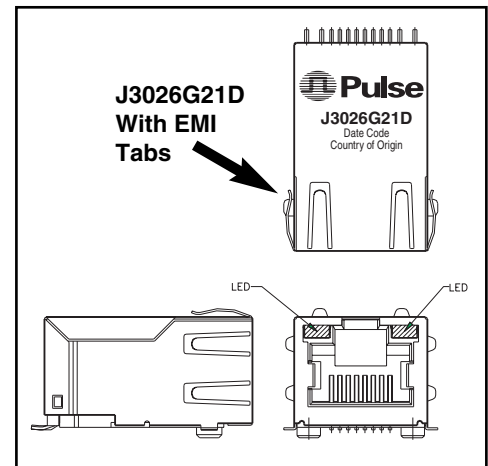
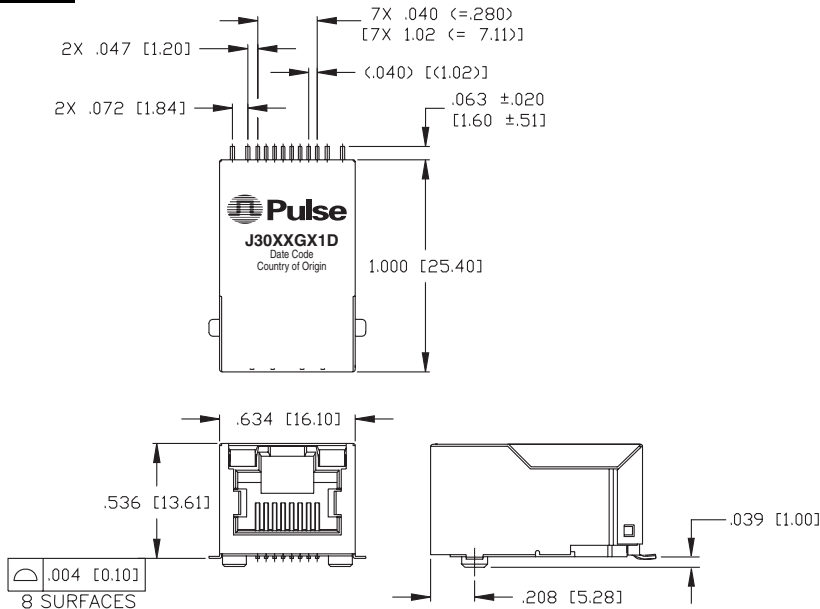
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE
PCB LAYOUT DIMENSIONS TO BE ± 0.003 UNLESS OTHERWISE SPECIFIED



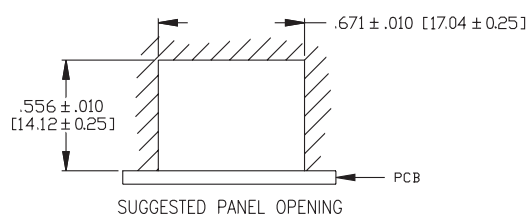
J3 Platform Mechanical

J3 Series



Dimensions: $\frac{\text{Inches}}{\text{mm}}$
 Unless otherwise specified,
 all tolerances are $\pm \frac{.010}{0.25}$

SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE
 PCB LAYOUT DIMENSIONS TO BE $\pm .003$ [± 0.08] UNLESS OTHERWISE SPECIFIED



J0C Application Note

NOTE: Modules are packaged in trays, unless Tape & Reel is specified. Please add the suffix **"T"** for Tape & Reel orders (ex: J0C-0003**T**). Add the suffix **"NL"** for RoHS compliant parts (ex: J0C-0003**NL** for Trays and J0C-0003**NLT** for Tape & Reel).



NOTE: Connector design not to scale

PCB Layout Recommendations:

1. For maximum EMI suppression (electromagnetic interference) place the decoupling capacitors adjacent to Vcc and 50Ω connections.
2. Connections to ground should be as short as possible.
3. Connections between the 10/100 IC and the SMT connector should be direct (ideally no change in direction) and of minimum length.

JV Application Note

This line of 10/100Base-TX SMT RJ45 1X1 Connector Magnetics Modules has been specifically designed for the implementation of a 10Base-T and 100Base-TX transmission over data-grade unshielded twisted pair cable (UTP-3, 5e and 6).

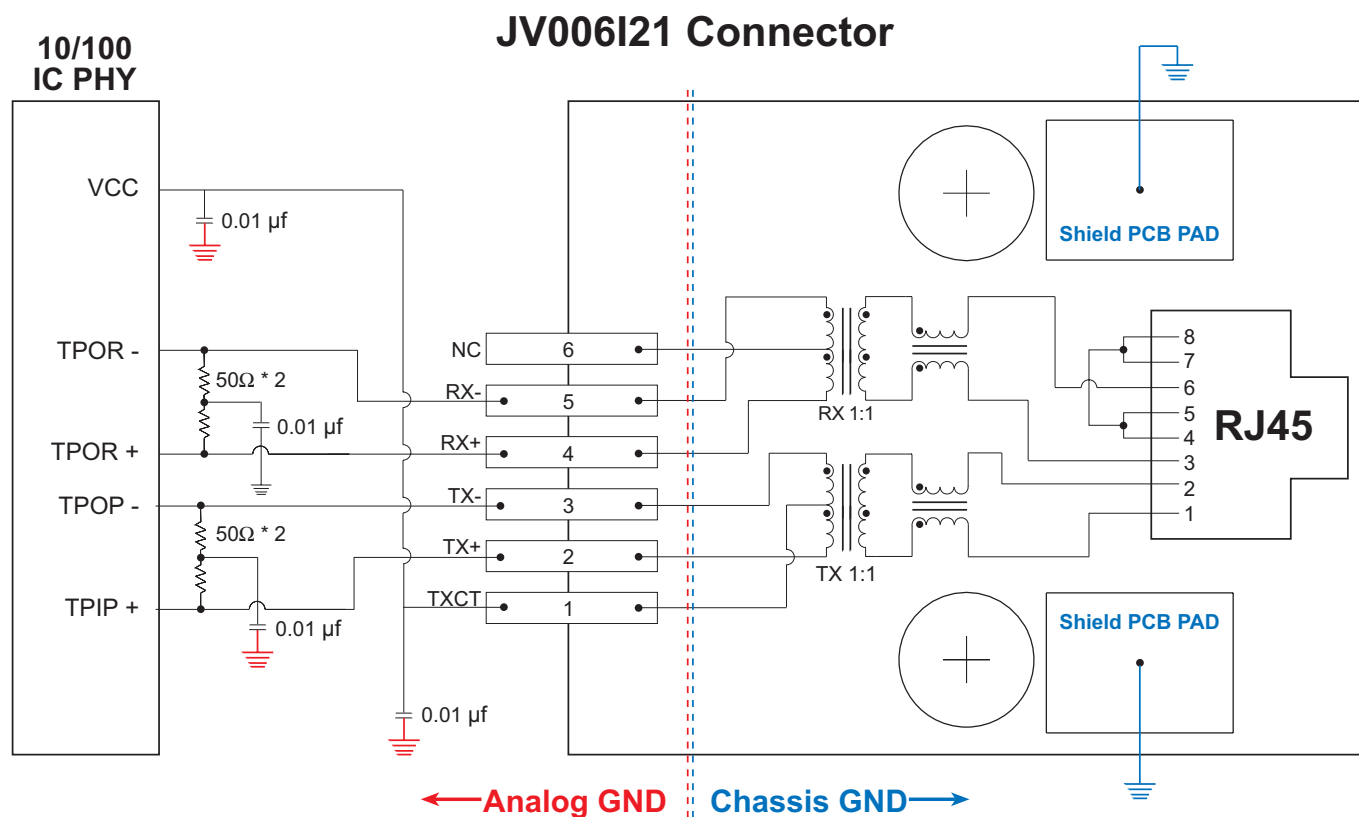
The connectors provide excellent EMI filtering and are suitable for adapter card and multiport applications. Pulse has worked closely with the leading IC manufacturers in providing these 10/100 solutions, thereby assuring compatibility with each transceiver.

The JV series meets the stringent open circuit inductance requirements imposed by IEEE. When an 8mA DC current is applied across the transformer windings, the transformer will provide at least 350µH. The transformers used in each module also provide 1500Vrms minimum isolation, wide bandwidth with

minimal attenuation and fast rise times to minimize system level jitter.

The 1X1 SMT RJ45 connectors manufactured by Pulse are designed to meet all published specifications after exposure to surface mount soldering temperatures. The SMT are robust enough to withstand convection and infrared reflow solder temperatures. Additionally, compliant leads provide excellent solder-joint reliability with a coplanarity of 0.10mm (0.004")

NOTE: Modules are packaged in trays, unless Tape & Reel is specified. Please add the suffix "T" for Tape & Reel orders (ex: JV006I21T). Add the suffix "NL" for RoHS compliant parts (ex: JV006I21NL for Trays and JV006I21NLT for Tape & Reel).



PCB Layout Recommendations:

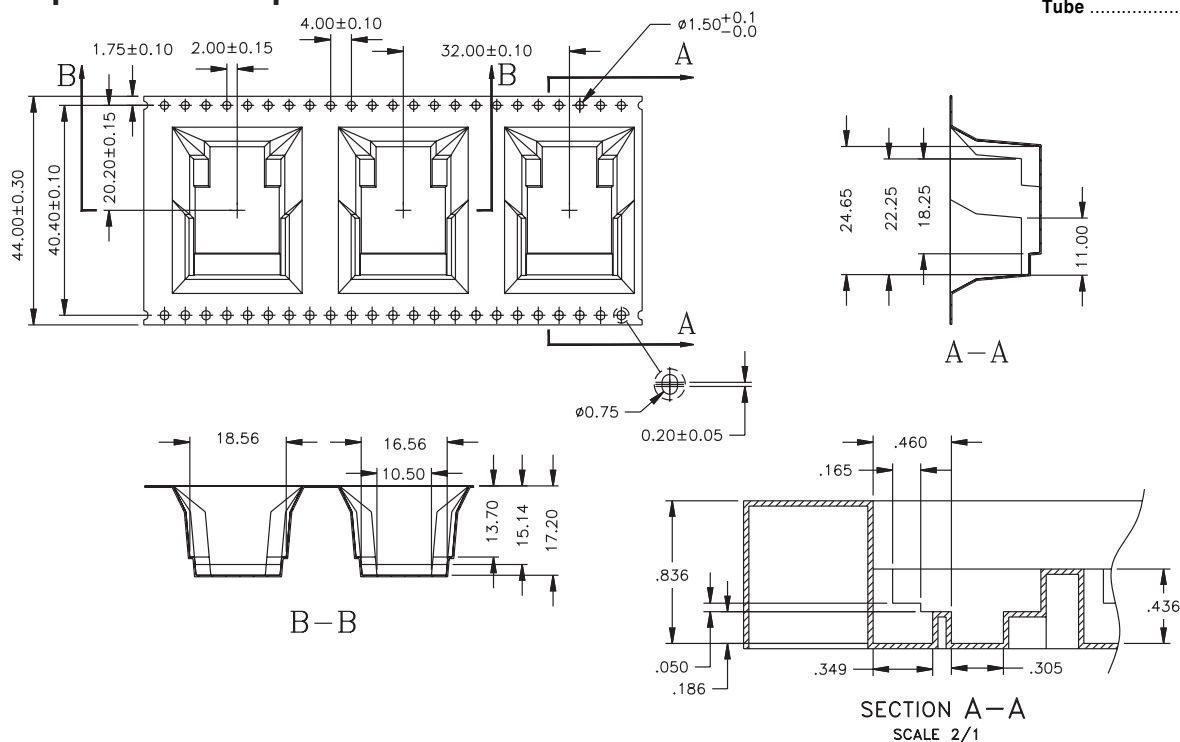
1. For maximum EMI suppression (electromagnetic interference) place the decoupling capacitors adjacent to Vcc and 50Ω connections.
2. Connections to ground should be as short as possible.
3. Connections between the 10/100 IC and the SMT connector should be direct (ideally no change in direction) and of minimum length.

J0C Packaging Specifications

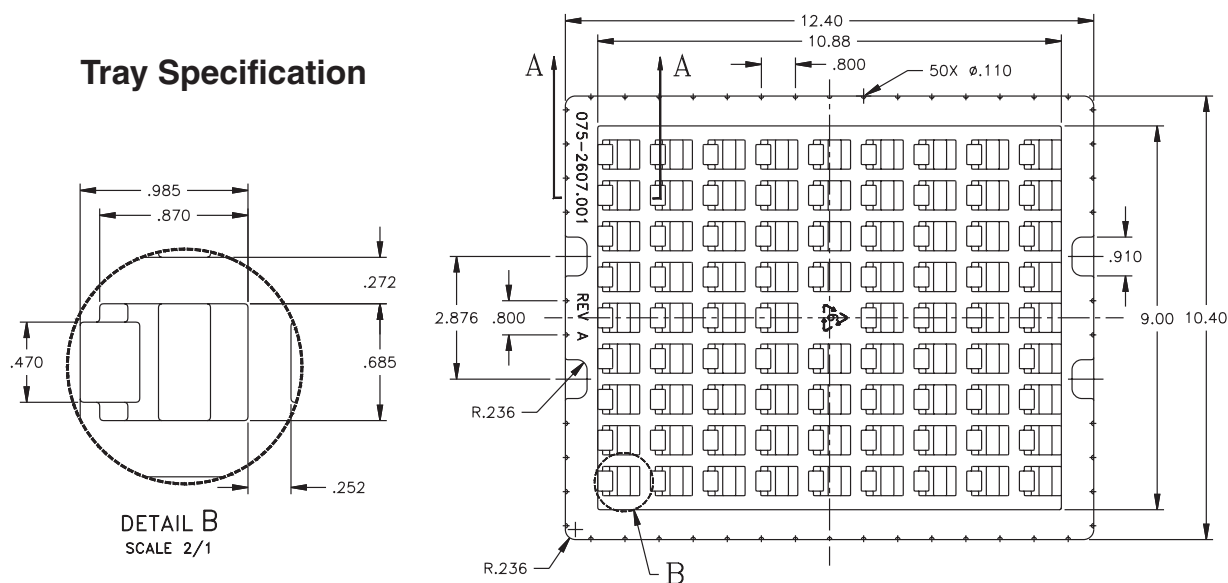
J0C Series

Weight.....7.07 grams
 Tape & Reel90/reel
 Tray80/tray
 Tape44x32mm
 Tube25/tube

Tape and Reel Specification



Tray Specification

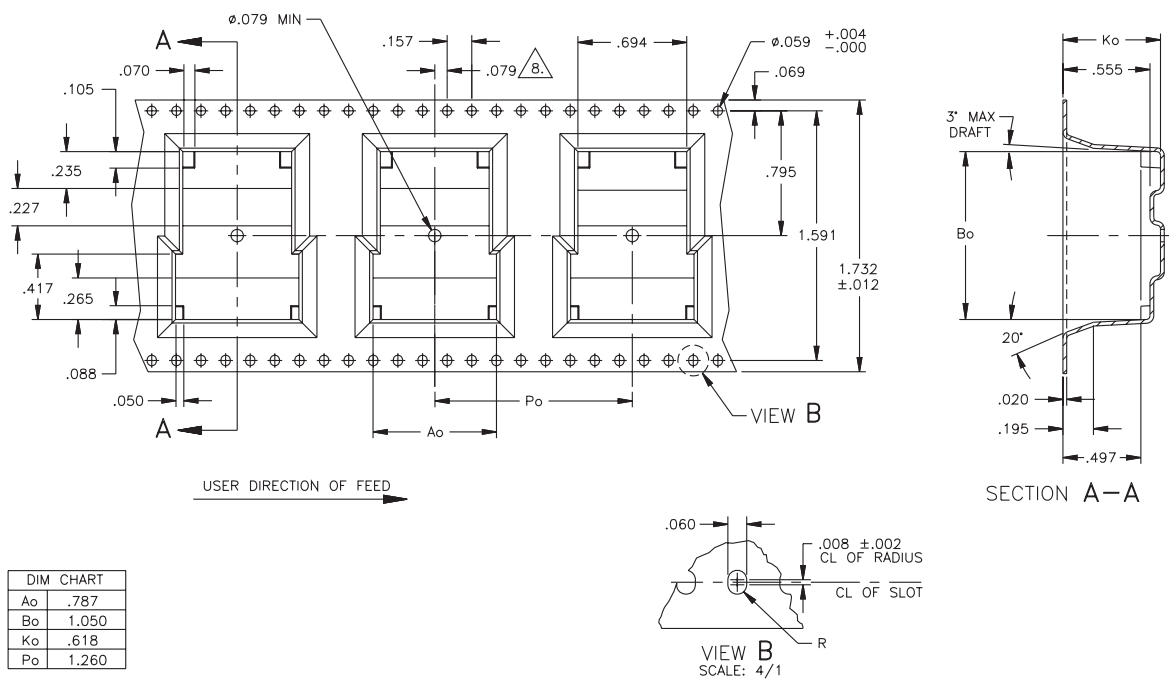


JV Packaging Specifications

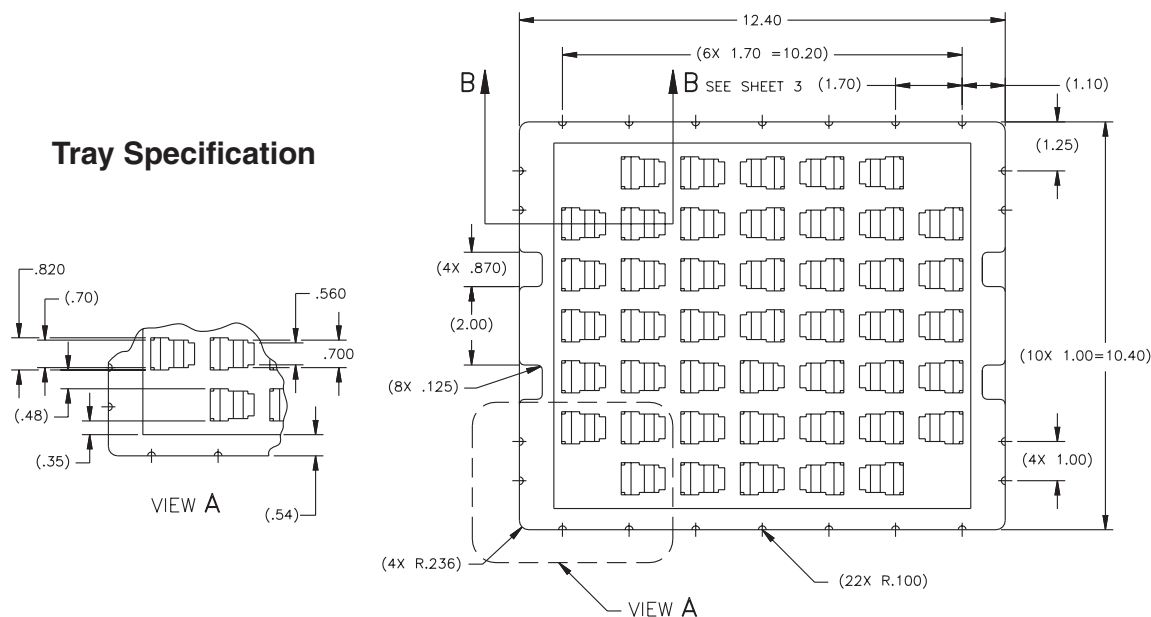
JV Series

Weight6.6 grams
Tape & Reel150/reel
Tray45/tray
Tape44x32mm

Tape and Reel Specification



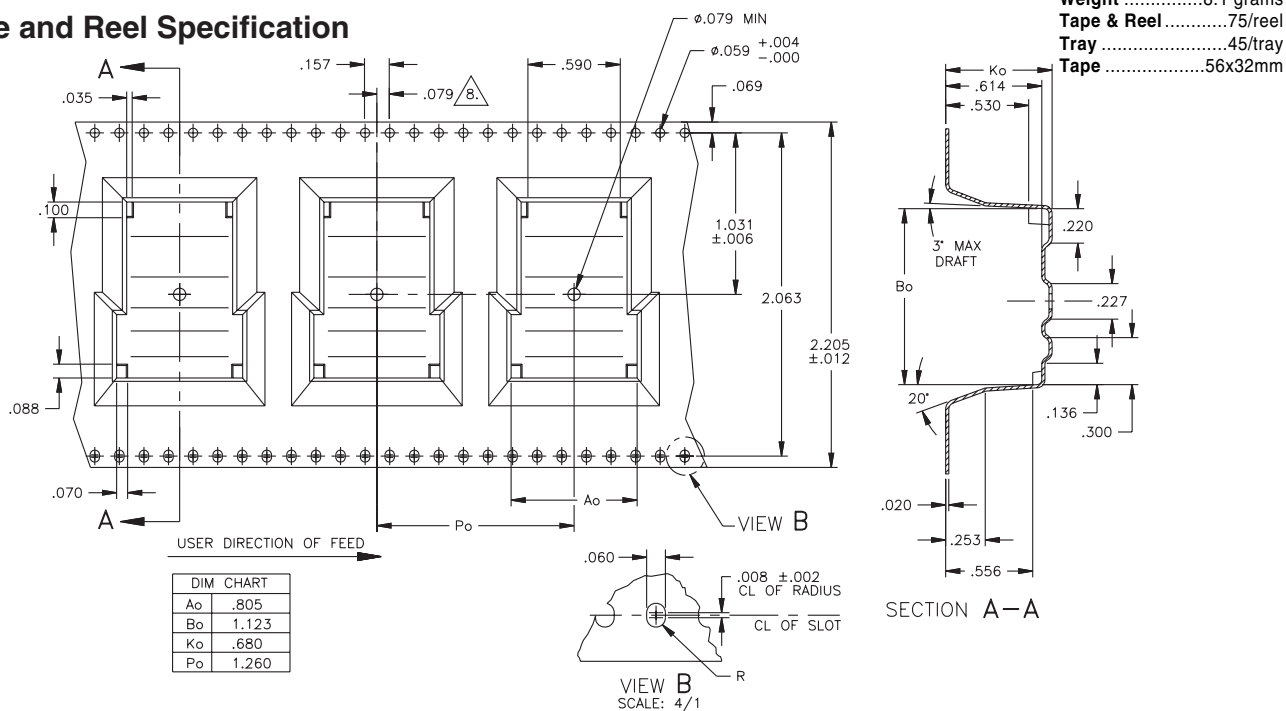
Tray Specification



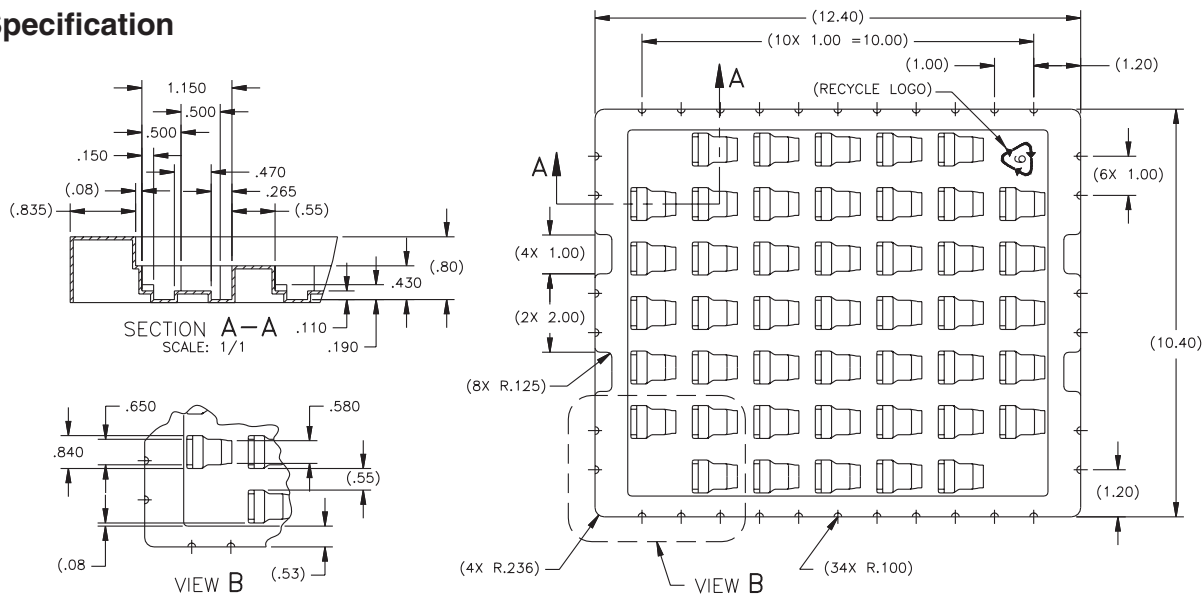
J3 Packaging Specifications

J3 Series

Tape and Reel Specification



Tray Specification



For More Information:

Pulse Worldwide Headquarters

12220 World Trade Drive
 San Diego, CA 92128
 U.S.A.
www.pulseeng.com
 TEL: 858 674 8100
 FAX: 858 674 8262

Pulse Northern Europe

3 Huxley Road
 Surrey Research Park
 Guildford, Surrey GU2 5RE
 United Kingdom
 TEL: 44 1483 401700
 FAX: 44 1483 401701

Pulse Southern Europe

Zone Industrielle
 F-39270
 Orgelet
 France
 TEL: 33 3 84 35 04 04
 FAX: 33 3 84 25 46 41

Pulse China Headquarters

No. 1
 Industrial District
 Changan, Dongguan
 China
 TEL: 86 769 5538070
 FAX: 86 769 5538870

Pulse North China

Room 1002
 No. 819
 Nanjing West Rd
 Shanghai
 China
 TEL: 86 21 32181071
 FAX: 86 21 32181396

Pulse South Asia

150 Kampong Ampat
 #07-01/02
 KA Centre
 Singapore 368324
 TEL: 65 6287 8998
 FAX: 65 6280 0080

Pulse North Asia

3F-4, No. 81, Sec. 1
 Hsin Tai Wu Road
 Hsi-Chih
 Taipei Hsien
 Taiwan
 TEL: 886 2 26980228
 FAX: 886 2 26980948

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