

RF COAXIAL IDC

00-6791



GENERAL DESCRIPTION

Designed to simplify the connection process, the new 6791 series wire to board connectors for coaxial cables enable simple termination with one press. Expanded the proven-reliable IDC (Insulation displacement connector) from signal/power transmission to high frequency transmission field up to 6GHz, the IDC contact pierces the jacket and insulation of the cable and makes direct contact with the strands and conductor of the wire at the same time. Comparing with direct soldering the soldering quality is no more depending on operator's skill which is hard to be unified and controlled. Hand soldering is now not preferred/allowed in automotive field. Comparing with costly traditional 2-piece solution which is generally taller than 10mm, the new 6791 Series offers a cost-effective solution and the on board height in less than 5mm after the cap is pressed. Process to prepare coaxial cable with a 2-piece connector is time consuming and costly, with the launch of the new 6791 series the process is now simplified and the cost is reduced.

APPLICATIONS

- The connector comes in multiple types for different coaxial cables.
- Small package size and mechanical strength allows usage in automotive and industrial antenna applications
- Reference Application Notes 201-01-214

ELECTRICAL

- Current Rating: 0.5 Amps (Current limit is cable dependent)
- Voltage Rating: 125Vac

ENVIRONMENTAL

- Operating Temperature: -40°C to +105°C

HOW TO ORDER

00	6791	001	00X	005
Prefix	Series	No. of Ways 001 = 1	Description 001 = 50Q: Outer Jacket 2.33mm-2.60mm 003 = 50Q: Outer Jacket 2.70mm-3.10mm See comparison of cable dimensions in below chart	Plating



FEATURES AND BENEFITS

- Can replace costly traditional RF connector systems
- Good RF performance up to 6GHz
- Mechanically strong with peel off force up to 70N
- Easy assembly process with ability to automate

MECHANICAL

- Insulator Material: Glass-Filled Nylon 46; UL94V-0
- Contact Material: Copper Alloy
- Plating: Lead-Free Tin Over Nickel

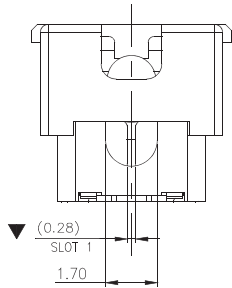
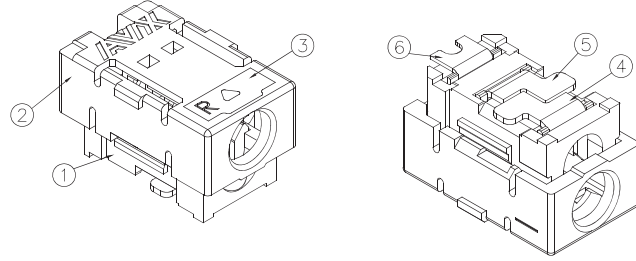
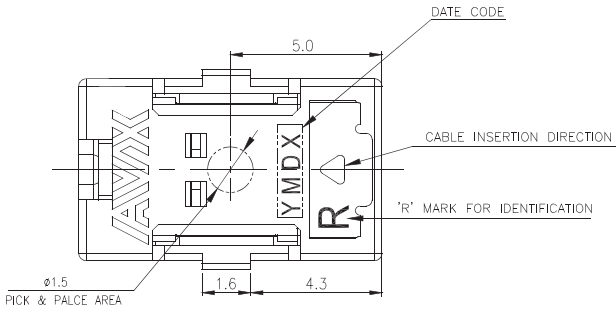
IDC COAX CABLE SIZE

Component	Diameter (mm)			
	-001		-003	
	Lower Limit	Upper Limit	Lower Limit	Upper Limit
Conductor	0.43	0.54	0.46	0.57
Dielectric	1.44	1.68	1.45	1.70
Braid Shield	1.84	2.08	1.85	2.10
Jacket	2.33	2.60	2.70	3.10

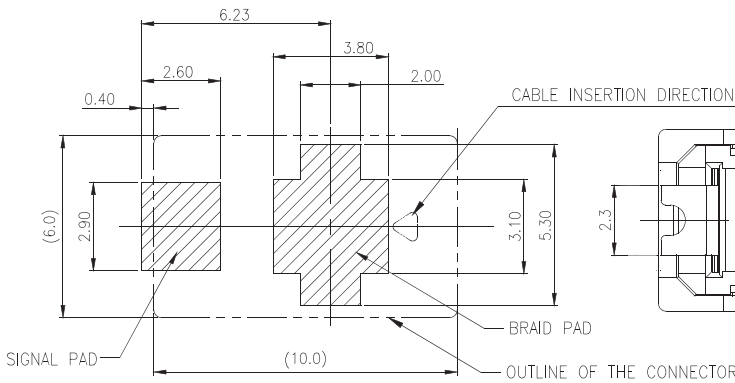
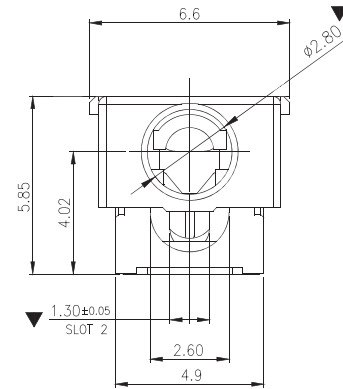
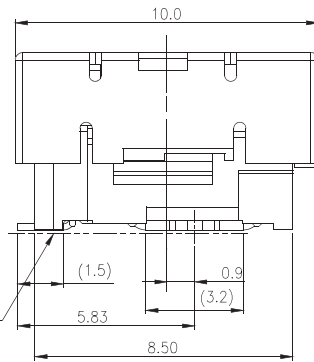
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SOLDER TAILS COPLANARITY
0.1 mm MAX.
(FROM SITTING PLANE)



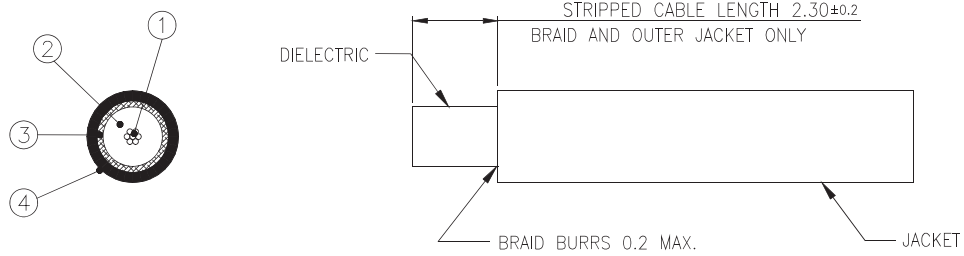
RECOMMENDED PCB LAYOUT
NOTE: TOLERANCE FOR PCB LAYOUT IS $\pm 0.05\text{mm}$

- NOTES:
- VOLTAGE RATING: 125V.
 - OPERATING TEMPERATURE: -40°C TO $+105^{\circ}\text{C}$.
 - FOR REFLOW SOLDERING LEAD-FREE PROCESS.
 - SOLDERING HEAT RESISTANCE REFLOW SOLDERING 260°C .
 - RECOMMENDED PRESSING STOP HEIGHT AS $3.9\pm 0.2\text{mm}$.
 - ALLOW CABLE INSERT TOLERANCE: 0.3mm MAX.
 - CRITICAL DIMENSION: ∇
 - GENERAL TOLERANCE $\pm 0.20\text{mm}$.

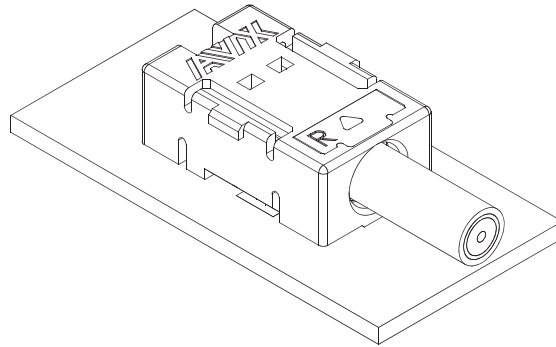
ITEM	DESCRIPTION	MATERIAL	FINISH	Q'TY	NOTE
⑥	SIGNAL CONTACT	COPPER ALLOY	Tin OVERALL, NICKEL UNDERPLATED	1	
⑤	BRAID CONTACT(2)	COPPER ALLOY	Tin OVERALL, NICKEL UNDERPLATED	1	
④	BRAID CONTACT(1)	COPPER ALLOY	Tin OVERALL, NICKEL UNDERPLATED	1	
③	SUPPORT PLATE	STAINLESS STEEL		1	
②	CAP	PA-46	UL94HB, BLACK	1	
①	HOUSING	PA-46	UL94HB, BLACK	1	

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CONSTRUCTION

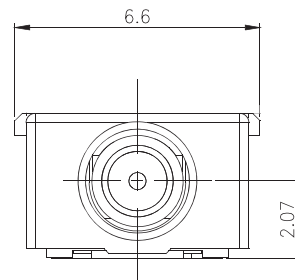
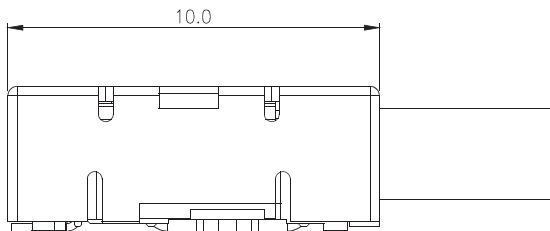


NOTE: JACKET STRIP OD DEFORMED MUST BE THAN LESS $\phi 2.75\text{mm}$ AFTER CUT OFF.



APPLICABLE COAXIAL CABLE DIMENSIONS:

COMPONENT	DIAMETER (mm)	
	LOWER LIMIT	UPPER LIMIT
(1) CONDUCTOR	$\phi 0.43$	$\phi 0.54$
(2) DIELECTRIC	$\phi 1.44$	$\phi 1.68$
(3) BRAID SHIELD	$\phi 1.84$	$\phi 2.08$
(4) JACKET	$\phi 2.33$	$\phi 2.60$

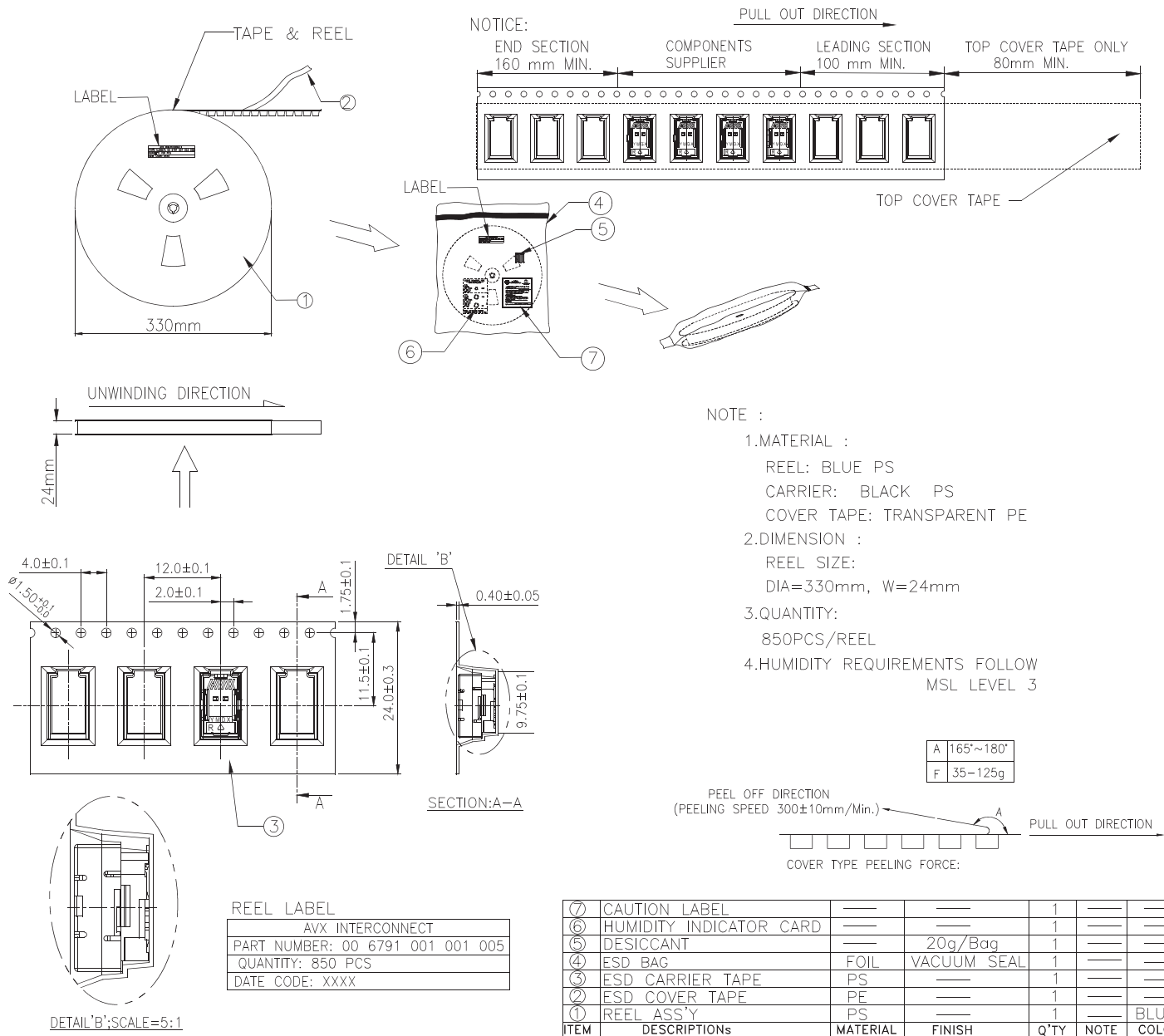


WIRED CONNECTOR

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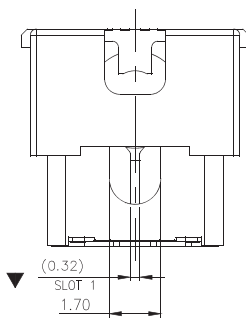
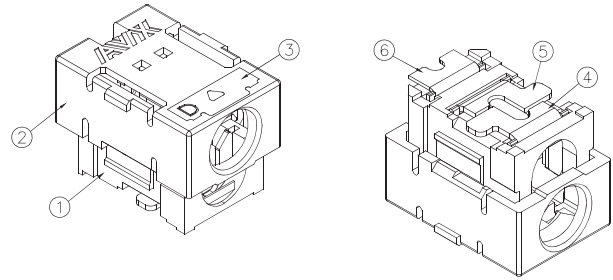
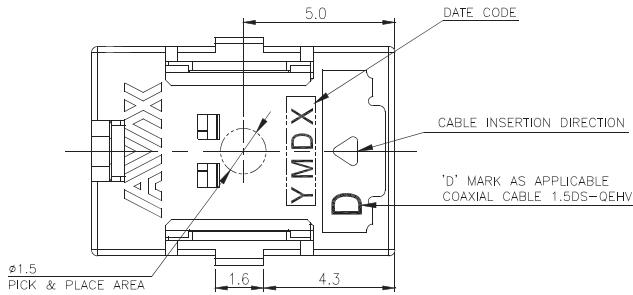
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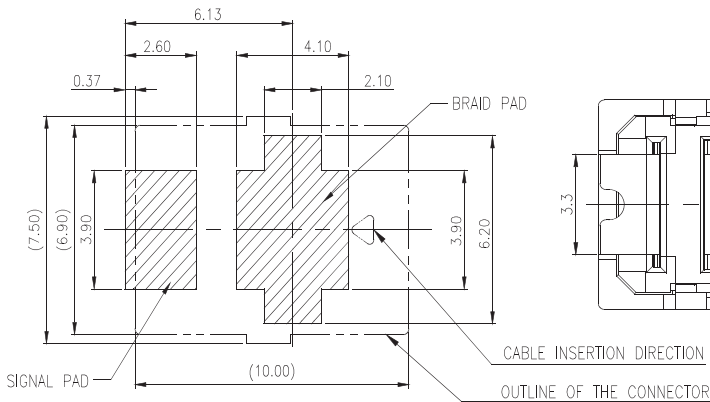
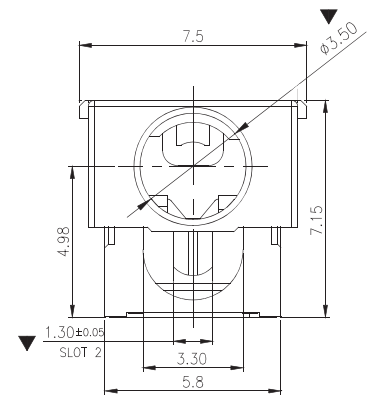
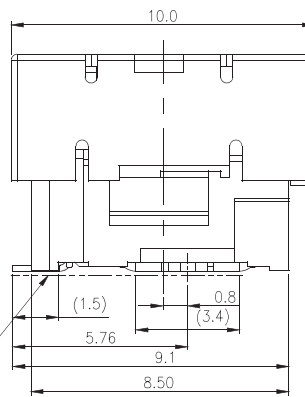
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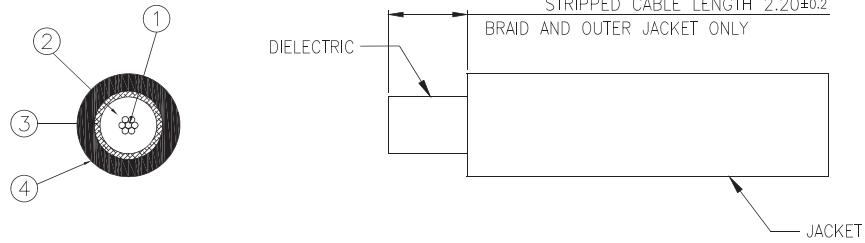
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 - SOLDERING HEAT RESISTANCE REFLOW SOLDERING 260°C .
 - RECOMMENDED PRESSING STOP HEIGHT AS 4.5 ± 0.05 mm.
 - ALLOW CABLE INSERT TOLERANCE: 0.3mm MAX.
 - CRITICAL DIMENSION: ▼
 - GENERAL TOLERANCE ± 0.20 mm.

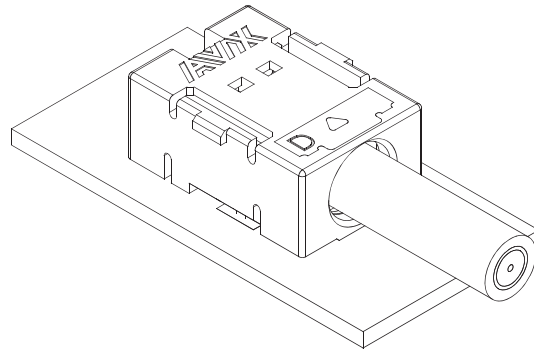
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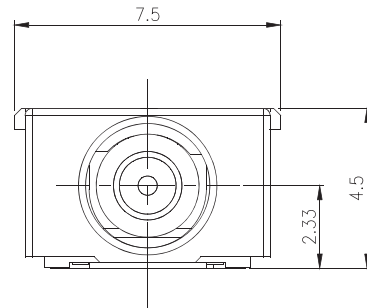
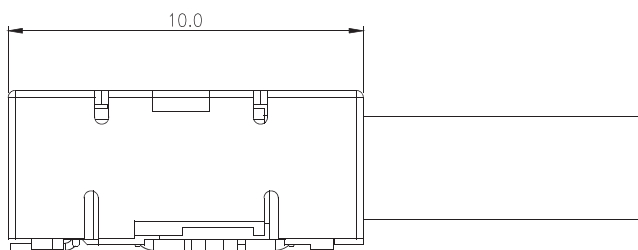


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(3) BRAID SHIELD	$\phi 1.85$	$\phi 2.10$
(4) JACKET	$\phi 2.70$	$\phi 3.10$



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