# Matched Impedance

### **Ribbon Cable**

#### PRODUCT DESCRIPTION



FEP (Fluorinated Ethylene Propylene) insulated ribbon cable extruded to match specific system impedance with typical speeds < 1 Ghz and risetimes > 1 ns.

- -Low Cost Alternative to Coax & Twinax
- -High Density Cable
- -Low Dielectric FEP Insulation
- -Controlled Impedance Cable
- -Low Crosstalk Cable
- -Solder Resistant Insulation
- -Low Capacitance Cable

#### **SPECIFICATIONS**

Matched Impedance						
Typical Impedance	Signal Pitch	Signal Count	Wire Type	Product		
50Ω	1.27mm/.050" ±0.05mm/0.002"	10 to 64	Signal: 30 AWG, Solid, Silver Plated Copper Ground: 28 AWG, Solid, Silver Plated Copper	C50-01-**-N5		
75Ω	1.27mm/.050" ±0.05mm/0.002"		Signal: 32 AWG, Solid, Silver Plated Copper Ground: 30 AWG, Solid, Silver Plated Copper	C75-01-**-N4		
90Ω	1.27mm/.050" ±0.05mm/0.002"		Signal: 32 AWG, Solid, Silver Plated Copper Ground: 32 AWG, Solid, Silver Plated Copper	C90-01-**-N5		
95Ω	1.27mm/.050" ±0.05mm/0.002"		Signal: 33 AWG, Solid, Silver Plated Copper Ground: 33 AWG, Solid, Silver Plated Copper	C95-01-**-N1		

See specific details for  $50\Omega$  and  $75\Omega$  matched impedance cables on following pages



Temp-Flex designs and manufactures specialty insulated wire & cable for the medical, industrial, military & aerospace markets. We can custom design and manufacture your medical wire, coil, twisted pair, high speed coaxial cable, flexible microwave cable, flat ribbon cable, IDC cable, multi-flex cable, matched impedance cable, low inductance power transmission cable and a variety of other wire and cable constructions.

# Matched Impedance 50Ω

## **Ribbon Cable**

#### PRODUCT DESCRIPTION



FEP (Fluorinated Ethylene Propylene) insulated ribbon cable extruded to match specific system impedance with typical speeds < 1 Ghz and risetimes > 1 ns

- -Low Cost Alternative to Coax & Twinax
- -High Density Cable
- -Low Dielectric FEP Insulation
- -Controlled Impedance Cable
- -Low Crosstalk Cable
- -Solder Resistant Insulation
- -Low Capacitance Cable
- -UL Style 2445

#### **SPECIFICATIONS**

Matched Imped	lance 50Ω		
Parameters	Units		
Conductor Details			
Conductor Type	Signal 30 AWG, Solid silver plated copper	Grounds 28 AWG, Solid silver plated copper	
Insulation	FEP	Silver placed copper	
Number of Signals	10 to 64		
Color	Natural with Blue Polarity Strip (standard)		
<b>Electrical Specificati</b>		<b>-</b>	+
Impedance*	Ω	50	
Capacitance*	pF/ft	28.0	
Inductance*	μH	0.07	
Crosstalk %*	At 5 NS rise time and 10MHz Pulse	Near: 1.2	Far: 1.2
Voltage Rating	VRMS	100	
Progagation Delay*	ns/ft	1.4	
Conductor Resistance	Ω/1000 ft. max at 20°C	Signal: 104	Grounds: 65.3
Insulation resistance	MΩ	500/1000ft	
Dielectric Withstanding	VRMS	2000	
Voltage			
<b>Mechanical Specifica</b>	ation		
Operating Temperature	°C	-55 to 200	

<sup>\*</sup> Measured using G-S-G, all grounds commoned



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# Matched Impedance 75Ω

### PRODUCT DESCRIPTION



FEP (Fluorinated Ethylene Propylene) insulated ribbon cable extruded to match specific system impedance with typical speeds < 1 Ghz and risetimes > 1 ns.

**Ribbon Cable** 

- -Low Cost Alternative to Coax & Twinax
- -High Density Cable
- -Low Dielectric FEP Insulation
- -Controlled Impedance Cable
- -Low Crosstalk Cable
- -Solder Resistant Insulation
- -Low Capacitance Cable
- -UL Style 2445

#### **SPECIFICATIONS**

Matchad Turns	James 750		
Matched Imped	iance /512		
Parameters	Units		
Conductor Details			
Conductor Type	Signal 32 AWG, Solid silver plated copper	Grounds 30 AWG, Solid silver plated copper	
Insulation	FEP		
Number of Signals	10 to 64		
Color	Natural with Blue		
	Polarity Strip (standard)		
<b>Electrical Specificati</b>	ons		
Impedance*	Ω	75	
Capacitance*	pF/ft	17.8	
Inductance*	μH	.10	
Crosstalk %*	At 5 NS rise time and 10MHz Pulse	Near: 1.5	Far: 1.4
Voltage Rating	VRMS	100	
Progagation Delay*	ns/ft	1.4	
Conductor Resistance	Ω/1000 ft. max at 20°C	Signal: 162	Grounds: 104
Insulation resistance	MΩ	500/1000ft	
Dielectric Withstanding Voltage	VRMS	2000	
Mechanical Specifica	ation	•	•
Operating Temperature	°C	-55 to 200	

<sup>\*</sup> Measured using G-S-G, all grounds commoned



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