

# YSRPTC-420CR

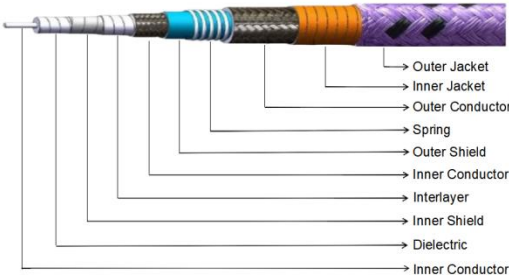
40 GHz, φ6.70 mm Ruggedized Precision Test Cable Assembly

### Key Features

- Ruggedized Construction
- Stable Phase Performance
- Low Loss & Low VSWR
- Enhanced Mechanical Protection
- High Reliability

### Applications

- Electronic Warfare Systems
- Military Test Platforms
- Outdoor RF Systems
- Harsh Environment Applications
- Phase-Critical Microwave Systems

Cable Construction										
			Cable Type	Dia.(mm)	Material					
			Inner Conductor	φ1.02	Silver plated Copper					
			Dielectric	φ2.80	Low Density PTFE					
			Inner Shield	φ2.95	Silver Plated Copper Strip					
			Interlayer	φ3.20	Low Density PTFE					
			Outer Shield	φ3.62	Silver Plated Copper Braid					
			Jacket	φ4.20	FEP					
			Outer Conductor	φ5.75	Silver plated Copper					
			Outer Jacket	φ6.70	PTFE					
			Electrical Specifications					Mechanical Specifications		
Operating Freq.	40 GHz				Static Bending Radius	33.5 mm				
Cut-off Freq.	41 GHz				Dynamic Bending Radius	67 mm				
Impedance	50 Ω				Weight	110 g/m				
Velocity of Propagation	81%				Phase Stability vs. Flexure	±7°				
Shielding Effectiveness	>90 dB				Amplitude Stability	±0.05 dB				
Dielectric Withstanding Voltage	1500 VDC				Flexure Cycling	≥100,000 Cycles				
VSWR	≤1.25 @ 40 GHz				Environmental Specifications					
					Operating Temperature	-55 to +125°C				
Attenuation (dB/100 M, Typical at +25°C) & Power Handling (W, Typical at +40°C)										
Freq.(GHz)	1	2	3	6	8	10	12.4	18	26.5	40
Attenuation	40.5	57.6	70.8	100.8	116.9	131.2	146.6	178.0	218.0	271.2
Avg. Power	743	523	426	299	258	230	205	169	138	111
Typical Cable Attenuation Calculation Formula: $K1*\sqrt{F}(\text{MHz}) + K2*F(\text{MHz})$ $K1=1.267795, K2=0.000440$										
Connectors Options										
Connectors	Freq.(Max)	VSWR (Max)			Connectors	Freq.(Max)	VSWR (Max)			
2.92 mm (K)	40 GHz	1.30:1			SMA (S)	27 GHz	1.25:1			
3.5 mm (3)	27 GHz	1.30:1			N(N)	18 GHz	1.25:1			

### Cable Assemblies Naming Rule:

PN: Cable-Length(M)-Connector 1-Connector 2

Eg.: YSRPTC-420CR-1M-SM-SF means YSRPTC-420CR cable, L=1M, SMA(M)-SMA(F).

Add "R" for Right-Angle Connector, Add "H" for Bulkhead Connector (e.g., SMR, SFH).