

**Dk 2.9 Df 0.002
@14GHz**

**Water absorption
0.04%**

**Peel strength
0.8N/mm**

Applications Avionics / Wireless

Avionics/Space Application, Laptop, Tablet PC,
4K/8K Display (High-Speed FPC Cable),
Automotive Components



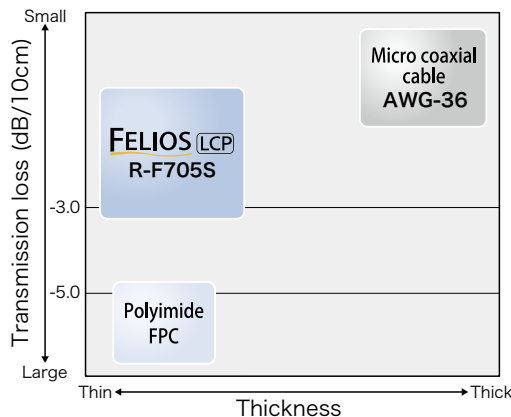
FELIOS LCP

Double-sided R-F705S

Flexible circuit board materials LCP (Liquid Crystal Polymer)

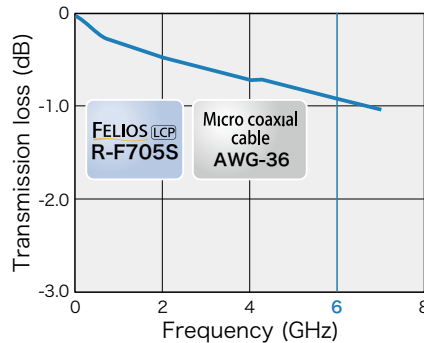
Good high-frequency properties make this material suitable for high-speed large-volume data transmission by mobile devices. R-F705S may be used as a replacement of micro coaxial cable and millimeter-wave radar antenna.

Concept



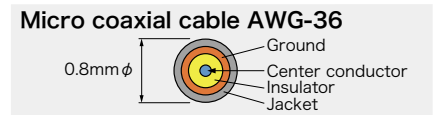
In addition the thickness advantage, one FPC cable can replace several coaxial cables.

Frequency dependence by transmission loss

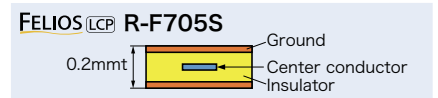


Result @6GHz

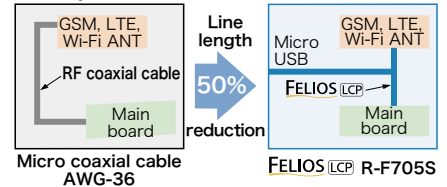
FELIOS LCP R-F705S	-1.0dB / 5cm
Micro coaxial cable AWG-36	-1.0dB / 10cm



Thickness **75%** reduction



Example



General properties

Item	Test method	Condition	Unit	FELIOS LCP R-F705S
Solder heat resistance	JIS C 6471	288°C solder float for 1min	-	No abnormality
Dielectric constant(Dk)	14GHz	Balanced-type circular disk resonance	-	2.9
Dissipation factor(Df)				0.002
Dielectric constant(Dk)	10GHz	Cavity resonance	-	3.3
Dissipation factor(Df)				0.002
Water absorption	Internal method	25°C 50h immersion	%	0.04
Peel strength	ED:18 μ m	IPC-TM-650 2.4.8	N/mm	0.8
Dimensional stability	IPC-TM-650 2.2.4	After etching MD/TD	%	0.008/0.007
		After E-0.5/150 MD/TD		0.052/0.035
Flammability	UL	A+E-168/70	-	94VTM-0
Outgas	TML/CVCM/WVR*	ASTM E595-07/ASTM E595-15	%	0.05 / <0.01 / 0.04

The sample thickness is 0.1mm.

* TML: Total Mass Loss, CVCM: Collected Volatile Condensable Material, WVR: Water Vapor Recovered

Our Halogen-free materials are based on JPCA-ES-01-2003 standard and others.

Please see our website for Notes before you use.

The above data are typical values and not guaranteed values.

industrial.panasonic.com/ww/electronic-materials

Panasonic Industry R-F705S

Panasonic Industry Co., Ltd. Electronic Materials Business Division

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