

## 301-KAP50



**Radiation resistant 50 Ohm coaxial cable with similar size of RG174 U**

**Up to 300°C continuous use, for frequencies up to the 1 GHz range**

Conductor:		
Silver plated copper conductor, multi strand		
7 x 0.127mm		~28AWG 7/36
Conductor diameter		0.38mm
Area		0.089mm <sup>2</sup>
Resistivity @20°C (inner conductor)		209 Ohm/km
Insulation		Kapton
Screen, Silver plated copper, coverage		>80%
Outer insulation		Kapton
Total Diameter		2.38mm (+/-0.1)
(without outer insulation 2.03mm, without screen 1.66mm)		
Voltage rating, conductor to screen		>10KV DC (in vacuum @ RT) ~1KV DC for temp. >250°C
Disruptive discharge voltage		>20KV DC @ RT
Max. temperature		300°C
Impedance		50 Ohm (+/-10%)
Capacitance		110pF/m (+/-10)
Resistivity conductor to screen	>20GOhm/m @ 5KVDC	>2GOhm/m @ 10KVDC
Damping:	0.4db/m @200MHz, 1db/m @500MHz, 1.6db/m @1GHz, 2.9db/m @2 GHz, 4.5 db/m @3GHz *)	
Radiation resistant up to		1000 Mrad
Weight		9,8g/m
Vacuum Level		typ. 10 <sup>-12</sup> mbar is achievable

\*) : Sample with SMA connectors on both ends, typical values  
For use at 10KV and above, the screen must be cut back for min. 30mm

### Typical values for current

Room Temperature	~ 1 A
up to 250°C	~ 0.8 A
up to 280°C	~ 0.5 A
up to 290°C	~ 0.4 A

The maximum current is dependant on the installation, above values are typical calculated values for single wires, not covered.

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