

Data sheet for BCDR-110G and BCDR-67G

Description	General information
Frequency range	BCDR-110G 6.5GHz ~ 110 GHz (Spec.) 6.5GHz ~ 120 GHz (Typ.) BCDR-67G 6.5GHz ~ 67 GHz (Spec.) 6.5GHz ~ 70 GHz (Typ.)
Circular disk electrode (nominal)	∅12mm, 15mm, 18mm (3-type) Thickness 60 um
MUT (Material under test)	Two dielectric, non-magnetic flat-and-parallel surface disks with identical thickness and characteristics (Not limited to circular shape)
MUT size (typ.)	Minimum: 1.5 times of circular disk electrode diameter Recommend > x2 of circular disk electrode diameter Maximum: ∅ 49mm
MUT thickness (typ.)	0.1 ~ 1.0 mm (suitable 0.2 ~ 0.5mm)
Measurable permittivity (typ.)	1.1 ~ 10
Accuracy (typ.)*1,*2	+/- 1% (@ $\epsilon_r=2$, t:>0.2mm)
Measurable Loss tangent (typ.)	$1 \times 10^{-2} \sim 1 \times 10^{-4}$
Accuracy (typ.)*1	± 0.0001 (@ $\tan \delta=0.002$, $\epsilon_r=2$, t: >0.4mm) ± 0.0004 (@ $\tan \delta=0.02$, $\epsilon_r=2$, t: >0.2mm) ± 0.002 (@ $\tan \delta=0.02$, $\epsilon_r=2$, t: >0.2mm)
Connector type	BCDR-110G: 1.0 mm (f) coaxial BCDR-67G: 1.85mm (f) coaxial
Supported instrument	Keysight N52xx PNA/PNA-X series network analyzer
Operation Environment	Temp. 20 to 25 degree C, humidity 15% to 95%RH
Storage Environment	Temp. 0 to 40 degree C, humidity 15% to 95%RH
Dimension	104 (W) x 172 (D) x 330 (H) mm
Weight	5 kg
Regulation, Standard	Complies with IEC 63185 test method Complies with DIRECTIVE 2011/65/EU(RoHS 2)

*1: Require full two-port VNA calibration at the end of coaxial cable before measurement.

*2: Based on a sample PTFE sheet measurement attached to the resonator. Accuracy depends on sample surface and material properties.