

CT – FlexiHopper, Frequency Diversity

**Frequency Diversity and 7 GHz
Circulator T55056.01 with Nokia
FlexiHopper Microwave Radio**

**Technical Note
No.88**

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TN 88 FREQUENCY DIVERSITY AND 7 GHZ CIRCULATOR
T55056.01 WITH NOKIA FLEXIHOPPER MICROWAVE
RADIO

Validity: (Product Specific)

Software

Hardware

x

Circulator

Keywords: Frequency Diversity, FlexiHopper and Circulator

Summary:

Circulator can be used in Frequency Diversity (FD) protection for Nokia FlexiHopper. The circulator makes it possible to use only one antenna with two outdoor units. Frequency diversity systems are used mainly under 15 GHz microwave radio links. This application note describes solution only for Nokia FlexiHopper operating at 7GHz frequency band.

Description:

Please find information from attached Application Note!

Instructions

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Technical Note Revision History

DATE	VERSION	EDITOR	SUMMARY OF CHANGES
02.02.2005	1 st version	TKa	

LIST OF ACTIVE TECHNICAL NOTES FOR CT:

No	Title	TN Version	Valid in
35	Management channel problem	1.0	FIU 19
36	FlexiHopper 38 GHz quality problem	1.0	FlexiHopper 38 GHz
37	Change of the Sales Item Structure of FIU 19	1.0	FIU 19
41	A memory leakage causes unnecessary reset into radio units	1.0	FlexiHopper, MetroHopper, FIU 19, RRIC
42	A protected FIU 19 indicates a wrong alarm status	1.0	FIU 19
43	Discontinued Q1 cable T38122.41	1.0	Q1 Cable, FIU 19, DMR18-38 C
44	Discontinued Q1 coupling connector T38122.50	1.0	Q1 coupling connector, FIU 19, DMR18-38 C
45	Transport release TR5.0	1.0	FlexiHopper, MetroHopper, FIU 19
46	Q1 channel blocked when DMR8-23 is powered off	1.0	DMR8-23
47	FIU 19E for supporting SNMP and IP based DCN	2.0	FIU 19E, FlexiHopper, MetroHopper
49	Nokia approved Flexbus Cables & Connectors	3.0	FlexiHopper, MetroHopper
50	FIU 19RJ	1.0	FlexiHopper, MetroHopper
51	A FIU 19E Hardware modification	1.0	FIU 19E A1 HW version
53	MetroHopper alarm Fault in Installation	1.0	MetroHopper
54	An Update on FlexiHopper SW Releases (E1)	1.0	FlexiHopper
55	Use of Fault Code 168 with FIU 19E Release C1.5	1.0	FIU 19E
56	Typographical Error In MetroHopper Stickers	1.0	MetroHopper
57	Remote SW Activation for Cellular Transmission Network Elements	1.0	FlexiHopper, MetroHopper, FIU 19
58	Transmission Loader C1.0	1.0	Transmission Loader
59	Removed Station Type Setting	1.0	Hopper Manager
60	Changes in FlexiHopper OU Performance Management alarm threshold setting window	1.0	Hopper Manager, FlexiHopper
61	An Update on MetroHopper releases (C3.0)	1.0	MetroHopper
62	Application Note: Protection Methods in Nokia FlexiHopper and FlexiHopper Plus Microwave Radios	2.0	FlexiHopper, FIU 19(E), FXC RRI
63	An Update on HopperManager Releases (C4.5)	1.0	Hopper Manager
64	Using USB to Serial Port Converters with Hopper Manager and AXC-FB Hopper Manager	1.0	Hopper Manager
65	New improved system values introduced to Nokia FlexiHopper	1.0	FlexiHopper
66	Update on DMR Manager	1.0	DMR Manager
67	EOW/Service Telephone	1.0	FIU 19, FlexiHopper
68	Incoming signal level incorrent (FC59)	1.0	MetroHopper, FlexiHopper
69	Scrambling code setting in HopperManager C4.5	1.0	HopperManager
70	Commissioning FlexiHopper with RRIC	1.0	FlexiHopper, FlexiHopper Plus
71	FIU 19E C2.0	1.0	FIU 19E
72	Corrosion on Alignment Unit	1.0	FlexiHopper
73	An update on MetroHopper Releases C3.1	1.0	MetroHopper
74	Restoring of FlexiHopper Plus Radio Backup	1.0	FlexiHopper Plus
75	Application Note: Dual Polarisation Usage on FlexiHopper and FlexiHopper Plus Microwave Radio Links	1.0	FlexiHopper, FlexiHopper Plus
76	Excessive error rate alarm threshold change in FlexiHopper	1.0	FlexiHopper
77	FlexiHopper Antenna Specifications Changes	1.0	FlexiHopper
78	New PowerHopper hardware version	1.0	PowerHopper
79	ALCQ and Fading Margin Measurement in Nokia FlexiHopper and FlexiHopper Plus Microwave Radios	1.0	FlexiHopper, FlexiHopper Plus
80	ALCQ and Fading Margin Measurement in Nokia FlexiHopper and FlexiHopper Plus Microwave Radios	1.0	FlexiHopper Plus
81	Removal of Excessive error rate alarm (FC 96) in Nokia FlexiHopper and FlexiHopper Plus	1.0	FlexiHopper, FlexiHopper Plus
83	An Update on FlexiHopper 15GHz HW Releases	1.0	FlexiHopper, FlexiHopper Plus
84	Flexbus cable quality check	1.0	FlexiHopper, FlexiHopper Plus, FIU19, FIU19E
85	New codes for Transmission Loader and Hopper Manager	1.0	Transmission Loader, Hopper Manager
86	An update on FlexiHopper Plus 38GHz HW Releases	1.0	FlexiHopper, FlexiHopper Plus
87	New Grounding Kit for Flexbus cables	1.0	FlexiHopper, FlexiHopper Plus
88	Frequency Diversity and 7 GHz Circulator T55056.01 with Nokia FlexiHopper Microwave Radio	1.0	FlexiHopper