

IRT Eurocard

Types DDF-4100/50

Dual 50 Ohm RF Passive Splitter

Designed and manufactured in Australia

IRT can be found on the Internet at: http://www.irtelectronics.com

IRT Eurocard

Type DDF-4100/50

Dual 50 Ohm RF Passive Splitter

Instruction Book

Table of Contents

Section	Page
Operational Safety	2
General Description	3
Technical Specifications	4
Installation	5
Front and rear layouts	6
Maintenance & Storage	7
Warranty & Service	7
Equipment return	7
Drawing list index	8

Operational Safety:

WARNING

Operation of electronic equipment involves the use of voltages and currents that may be dangerous to human life. Note that under certain conditions dangerous potentials may exist in some circuits when power controls are in the **OFF** position. Maintenance personnel should observe all safety regulations.

Do not make any adjustments inside equipment with power **ON** unless proper precautions are observed. All internal adjustments should only be made by suitably qualified personnel. All operational adjustments are available externally without the need for removing covers or use of extender cards.

IRT Eurocard Type DDF-4100/50 Dual 50 Ohm RF Passive Splitter

General Description

The DDF-4100/50 is a dual 50 Ohm RF passive splitters suitable for mounting in either IRT's 1RU or 3RU frames. Being passive, it require no power to operate.

The DDF-4100/50 is in a standard 3RU Eurocard format. As such, it can be mounted in the same frame as VDA's, ADA's, detectors and processors.

This splitter is rated for 200 MHz to 300 MHz operation and is intended for 140 MHz IF signals.

Due to its passive nature the splitter will continue to function regardless of mains power losses and may thus be used to provide redundant path outputs from equipment possessing only one output.

Technical Specifications DDF-4100/50 Dual 50 Ohm RF Passive Splitter

Input / outpu	t:					
Number		2				
Туре		50 Ohm				
Format		Passive 2 way split				
Performance	:					
Frequency range		200 MHz to 300 MHz				
Input return loss		>15 dB (typically $>20 dB$)				
Output return los	SS	>15 dB (typically >25 dB)				
Response		≤ 0.2 dB, referenced to 140 MHz				
Insertion loss		$3.4 \text{ dB} \pm 0.1 \text{ dB}$				
Maximum power dissipation		1 W				
Connectors:		BNC.				
Power requir	rement:	Nil – totally passive.				
Other:						
Temperature range		0 - 50° C ambient.				
Mechanical		Suitable for mounting in IRT 19" rack chassis with input and output connections on the rear panel.				
Finish:	Front panel	Grey background, black lettering & red IRT logo.				
	Rear assembly	Detachable silk-screened PCB with direct mount connectors to Eurocard and external signals.				
Dimensions		6 HP x 3 U x 220 mm IRT Eurocard.				
Supplied accesso	ories	Rear connector assembly				

Installation in frame or chassis:

See details in separate manual for selected frame type.

Signal Connection:

The DDF-4100/50 is primarily designed for use with 50 Ohm 140 MHz IF signals. Connections are made using suitable high quality 50 Ohm coaxial cable terminated in BNC connectors.

Alarm Indication:

Although the device is passive it is still possible to generate an alarm for a module absence indication.

For installation in FRU-4001 frame with SNMP control, if link LK1 on the rear assembly is closed an alarm will occur on the major alarm circuit when module is absent.

The connector J2 on the rear assembly can also be used to indicate a 'module present' by completing a circuit to ground or a series connection of several units for a single alarm if a module is absent. J2-1 is a ground connection. J2-2 connects to J2-3 via the main module when it is inserted into the rear assembly.



Front & rear panel connector diagrams

The following front panel and rear assembly drawings are not to scale and are intended to show connection order and approximate layout only.



Maintenance & Storage

Maintenance:

No regular maintenance is required.

Care however should be taken to ensure that all connectors are kept clean and free from contamination of any kind. This is especially important in fibre optic equipment where cleanliness of optical connections is critical to performance.

Storage:

If the equipment is not to be used for an extended period, it is recommended the whole unit be placed in a sealed plastic bag to prevent dust contamination. In areas of high humidity a suitably sized bag of silica gel should be included to deter corrosion.

Where individual circuit cards are stored, they should be placed in antistatic bags. Proper antistatic procedures should be followed when inserting or removing cards from these bags.

Warranty & Service

Equipment is covered by a limited warranty period of three years from date of first delivery unless contrary conditions apply under a particular contract of supply. For situations when "**No Fault Found**" for repairs, a minimum charge of 1 hour's labour, at IRT's current labour charge rate, will apply, whether the equipment is within the warranty period or not.

Equipment warranty is limited to faults attributable to defects in original design or manufacture. Warranty on components shall be extended by IRT only to the extent obtainable from the component supplier.

Equipment return:

Before arranging service, ensure that the fault is in the unit to be serviced and not in associated equipment. If possible, confirm this by substitution.

Before returning equipment contact should be made with IRT or your local agent to determine whether the equipment can be serviced in the field or should be returned for repair.

The equipment should be properly packed for return observing antistatic procedures.

The following information should accompany the unit to be returned:

- 1. A fault report should be included indicating the nature of the fault
- 2. The operating conditions under which the fault initially occurred.
- 3. Any additional information, which may be of assistance in fault location and remedy.
- 4. A contact name and telephone and fax numbers.
- 5. Details of payment method for items not covered by warranty.
- 6. Full return address.
- 7. For situations when "**No Fault Found**" for repairs, a minimum charge of 1 hour's labour will apply, whether the equipment is within the warranty period or not. Contact IRT for current hourly rate.

Please note that all freight charges are the responsibility of the customer.

Phone:

Email:

The equipment should be returned to the agent who originally supplied the equipment or, where this is not possible, to IRT direct as follows.

Equipment Service IRT Electronics Pty Ltd 26 Hotham Parade ARTARMON N.S.W. 2064 AUSTRALIA

61 2 9439 3744

service@irtelectronics.com

Fax: 61 2 9439 7439

Drawing List Index

Drawing #	Sheet #	Description
805342	1	DDF-4100/50 Dual 50 Ohm passive splitter schematic.

			Sheet	1 of 1	2064	
101	Title DDF-4100/50	DUAL 50 OHMS RF SPLIT	District No. 005040		IRT Electronics Pty. Ltd. RTARMON NSW AUSTRALIA 2	
	SIZE	A3	SCALE	N.T.S.		AF
C COPYRIGHT DO NOT COPY NOR DISCU DEE TO ANY		DRAWN K.N.	CHECKED	ENG. APP.	Revision: 1	Date: 26-Aug-2008



Pins 21a,b to 26a,b removed from the DIN64 plug on the module. Pins 21a,b to 26a,b cut short on the DIN64 socket on the rear panel.