Specification Sheet G2R25-001

Sixteen Section 1x2 SMA Type DC-26.5GHz
Failsafe Switching Module
Series G2R25

CE

August 2001

General

The relay-based G2R25 coaxial microwave switching module provides a flexible configuration for many applications. It provides up to sixteen individual relay sections within a single 2-slot module. Each relay element is individually shielded from each other and the internal control circuitry of the module.

Ultra-high reliability relay elements (>5,000,000 operations) are coupled with control and status circuitry. The module also features hot-swap control technology for easy maintenance.

A unique power saving control circuit reduces DC power and cooling requirements for the module and increases overall reliability. The number of sections included is determined by the model number, and a reduced configuration can be further populated while in the field.

For control and DC power, the module must be installed into any G2 type mainframe controller. The mainframe must have either the -100 or -600 power supply configuration, or the redundant -D100 or -D600 version. Optionally, a -200 or -D200 suffix may be used if the -2x suffix is specified.

Applications

- Antenna routing
- Backup channel sectors
- Communication installations
- ATE systems
- Switching high speed ECL/PECL data
- Satellite control centers
- Ground station IF signal routing

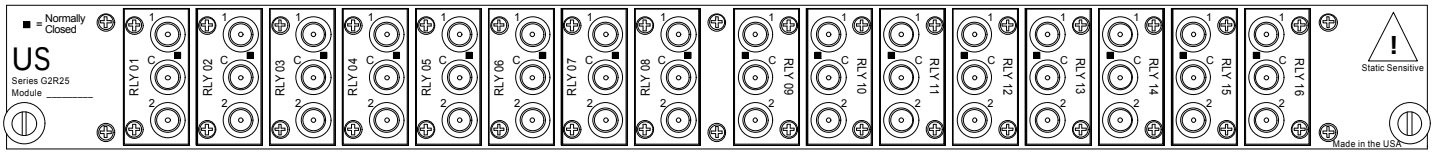
Features

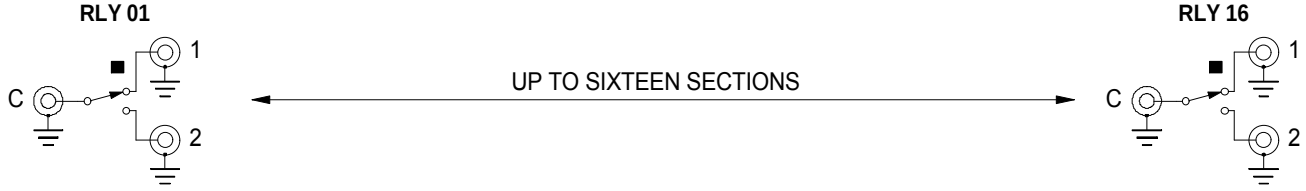
- High reliability relay elements
- DC to 26.5GHz bandpass (min)
- Flexible configuration expandable in field
- High performance stainless steel SMA signal connectors
- Hot-Swap module technology
- Plug-in relay elements
- Rugged aluminum shielded enclosure
- Built-in control and status circuitry
- Individually shielded sections
- Failsafe operation (normally closed port)

Configurations

Model Number	Number of Sections	Slots
G2R25-41X2-60	4	2 slots
G2R25-81X2-60	8	2 slots
G2R25-121X2-60	12	2 slots
G2R25-161X2-60	16	2 slots

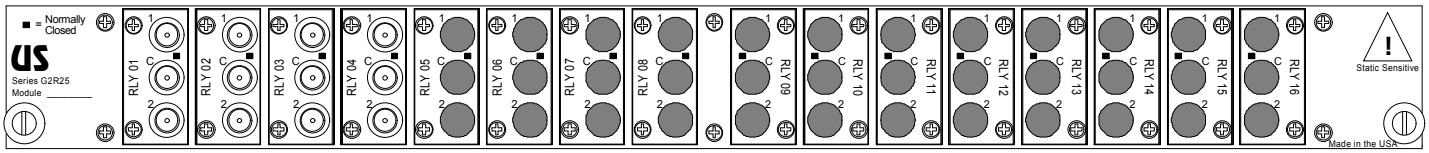
NOTE-1: *Specifying the -20 suffix (in place of the -60 suffix) will allow the module to be powered in a -200 or -D200 mainframe.*





Universal Switching Corporation
7145 Woodley Avenue, Van Nuys, CA 91406 USA
Phn (818) 785-0200 Fax (818) 785-0680 Web www.uswi.com E-Mail sales@uswi.com

G2R25-41X2-60



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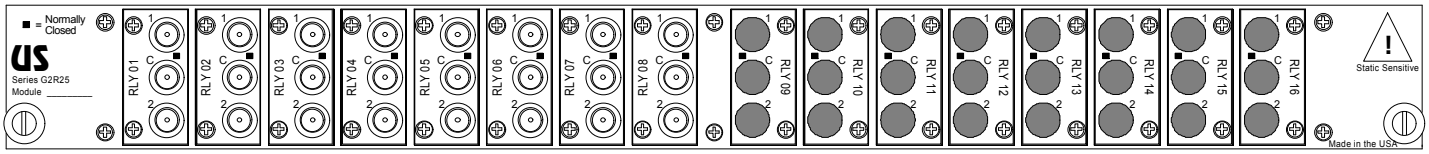

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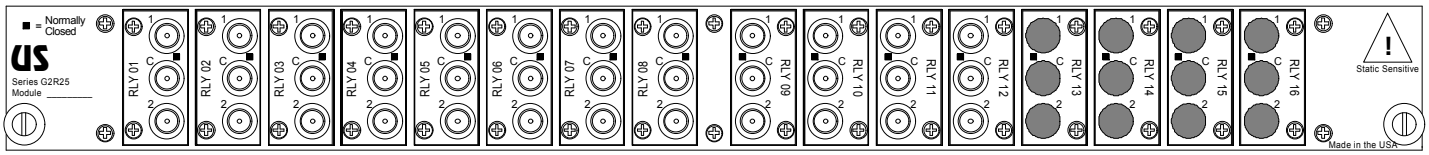

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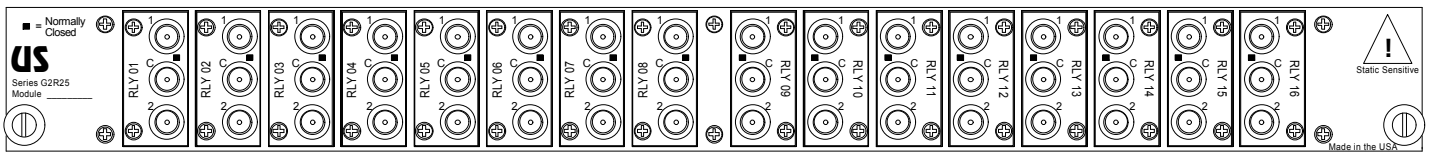

Signal Specifications

Switching elements	Relay-based
Operating mode	Failsafe (no power=NC to port 1)
Ports per relay section	Two (1x2 with no terminations)
Number of sections	Four to sixteen
Signal path	Analog, bi-directional
Signal connector	Stainless steel female SMA
Frequency range	DC - 26.5GHz (min)
Impedance	50 ohm
Insertion loss	<0.10dB @ 4GHz
	<0.20dB @ 8GHz
	<0.50dB @ 18GHz
	<0.70dB @ 26.5GHz
Repeatability	<0.10dB max
Crosstalk isolation (min)	>80dB @ 4GHz
	>75dB @ 8GHz
	>70dB @ 18GHz
	>60dB @ 26.5GHz
VSWR	<1.15 : 1 @ 4GHz
	<1.25 : 1 @ 8GHz
	<1.35: 1 @ 18GHz
	<1.50: 1 @ 26.5GHz
Maximum power	100 watts @ 2.5GHz
	40 watts @ 18GHz
Switching speed	<50mS (plus control time)

General Specifications

Module size	2 slot height
Control type	G2 compatible
Sparing	Hot-Swappable
Construction	Shielded aluminum case
Mating SMA torque	8 inch pounds MAX
DC power	-100 or -600 configuration
	+5V (digital), +15V (analog)
	(or -200, -D200 by special order)
Weight	<3lbs (fully populated)
Operating temp	0 to +70C
Non-operating temp	-20 to +85C
Humidity	0 to 95% (NC @ +25C)
Contact life	>5,000,000 operations (per port)
MTBF	>120,000 hours
	(per MIL-HDBK-217F, N1
	ground benign @ +25C)

Universal Switching's policy is one of continuous development, and consequently the company reserves the right to vary from the descriptions and specifications shown in this publication.

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Phn (818) 785-0200 Fax (818) 785-0680 Web www.uswi.com E-Mail sales@uswi.com

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