



ACI Communications, Inc. 

ET5018-1G

1 GHz 1550nm
Economic
Externally-modulated
Transmitter



Overview

The ACI ET5018 Series is a family of economic 1550 nm externally-modulated transmitter for CATV applications. ET5018-1G is in a convenient 1 RU 19" format and it provides a cost effective solution with outstanding performance. It delivers up to 9 dBm with narrow optical line width.

When it is linked with one or more EDFAs, ET5018-1G offers high CNR for long distance transmission. ET5018-1G offers excellent CSO and CTB performance. Additional feature of adjustable SBS suppression control is available.

This family of transmitters is a part of the full complement of products developed to support and enhance the deployment of traditional HFC, passive HFC, and fiber to the home (FTTH) Networks.

Features

- 1 RU, 19" rack-mount format
- 45 to 1002 MHz forward bandwidth
- 1 RU, 19" rack-mount format
- 45 to 1002 MHz forward bandwidth
- Patented RF predistortion circuit for excellent CNR and low distortion performance
- Adjustable SBS threshold (13, 16, 19 (18) dBm)
- Unique simultaneously SBS/SPM suppressing for point-to-point and point-to-multiple application
- Microprocessor control and monitoring
- Automatic/Manual gain control mode
- Front panel LCD display
- RS485 or SNMP control interface
- CATV
- FTTx
- Broadband video and data transmission

Specifications

ACI Communications, Inc.		ET5018-1G	
GENERAL	CONDITIONS	UNITS	SPECIFICATIONS
Optical Parameters			
Optical Wavelength		nm	1550 ± 10 nm or 100GHz ITU-T wavelengths between 1527.99-1564.68 nm
Optical Output Level		dBm	≥ 7 or ≥ 9
Optical Output Ports		N/A	2
SBS Suppression Level		dBm	Fixed or adjustable 13/16/19(18)
RF Parameters			
Frequency Range		MHz	45 ~1002
Flatness	45~1002 MHz	dB	± 0.75
Input RF Power Level		N/A	15-20 dBmV/ch with AGC control (OMI/ch=~3 ± 0.25%) or nominal 20 dBmV/ch (@77-ch loading) with MGC control
Input Impedance		Ω	75
Input Return Loss		dB	≥ 16
Test Point	relative to RF input	dB	-20 ± 1
Electrical/Environmental/Mechanical			
Operation Temperature Range		°C	0 ~ 50
Operating Humidity		RH	< 85%
Storage Temperature Range		°C	-20 ~ 60
Power Supply			90~260 VAC, 50/60 Hz or -48 VDC
Power Consumption		W	≤ 75
Dimension	D x W x H	mm	350 x 485 x 45 for RS-485/single AC or 447 x 485 x 45 for SNMP
Control Interface		N/A	RS-485 or SNMP
Weight		kg	< 6.5

Link Performance	Link Condition	CNR	CSO	CTB
78-ch NTSC Analog Only	B-2-B	52.5	63/61	63
	SBS19 (18)	51.0		
	SBS16	51.0		
	SBS13-1	49.0		
78-ch NTSC Analog + 75-ch QAM (550~1002MHz) @-6dB	B-2-B	51.0	63/61	63
	SBS19 (18)	49.5		
	SBS16	49.5		
	SBS13-1	47.5		
59-ch PAL Analog Only	B-2-B	52.5	63/61	63
	SBS19 (18)	51.0		
	SBS16	51.0		
	SBS13-1	49.0		
59-ch PAL Analog + 56-ch QAM (550~1002MHz) @-6dB	B-2-B	51.0	63/61	63
	SBS19 (18)	49.5		
	SBS16	49.5		
	SBS13-1	47.5		

Specifications

ACI Communications, Inc.		ET5018-1G			
Link Conditions	Launched Power after Booster EDFA	Fiber Length of 1st span	Launched Power after In-line EDFA	Fiber Length of 2nd span	Received Power
B-2-B	-	-	13 dBm	50 km	0 dBm
SBS19 (18)	19 (18) dBm	50 km			
SBS16	16 dBm	65 km			
SBS13-1	13 dBm	50 km			
SBS13-2	13 dBm	50 km			

Notes:

1. The noise figure of EDFA is 5.0 dB.
2. The minimum power into booster EDFA and in-line EDFA are 7.0 dBm and 3.0 dBm, respectively.
3. The equipvalent input noise of optical receiver is <7 pA/Hz^{0.5}, and optical responsivity is ≥0.90 A/W.
4. SMF-28 or equivalent is used.

Ordering Matrix

ACI ET5018-1G Configuration Sheet

Customer: _____

Created By: _____ Order Date: _____

ORDERING MATRIX 2015/4/24

Position	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
PART NUMBER	E	T	5	0	1	8	—	1	G												

10~11 **OPTICAL CONNECTOR**
 SC: SC/APC with shutter
 FC : FC/APC

12~13 **OPTICAL WAVELENGTH**
 16: | : 100 GHz ITU-T channel
 62:
 00: not specified

14~15 **OPTICAL OUTPUT LEVEL**
 07 : ≥ 7 dBm
 09 : ≥ 9 dBm

16~17 **SBS SUPPRESSION LEVEL**
 13 : 13 dBm AD : adjustable 13/16/18 dBm
 16 : 16 dBm
 18 : 18 dBm

18~19 **CONTROL INTERFACE**
 RS: RS-485
 SN: SNMP

20~21 **POWER SUPPLY / POWER CORD**
 SA: Single AC / N.A. power cord
 DA: Dual AC / N.A. power cord
 SD: Single DC 48V
 DD: Dual DC 48V
 EA: Single AC / European power cord
 UA: Dual AC / European power cord

NOTES: