

The C12419 which furnishes current-to-voltage conversion circuit is designed for use with current sources like photomultiplier tubes.

The performances are convenient to such an application as requiring a low noise and high gain preamplifier.

FEATURES

- Bandwidth: DC to 1 MHz
- Current-to-voltage Conversion Factor:
1 V/ μ A at 1 k Ω Load Resistance
- Inverting Output
- Adjustable Offset Level with VR
- Low Noise and High Gain

SPECIFICATIONS

Parameter		Description / Value
Frequency Bandwidth (-3 dB)		DC to 1 MHz
Current-to-voltage Conversion Factor	Load Resistance: 1 k Ω	1 V/ μ A
Rise Time	Typ.	350 ns
Input Polarity		Positive / Negative
Max. Input Current		$\pm 100 \mu$ A
Amplifying Method		Inverting Output
Output Impedance		50 Ω
Maximum Output Signal Voltage	Load Resistance: 1 k Ω	± 11 V Min.
	Load Resistance: 50 Ω	± 3 V Min.
Output Noise Voltage ^(A)	Typ.	1 mV rms
Connector	Input	BNC-R
	Output	BNC-R
	Power	DIN (6-pin)
Power Supply Voltage		± 15 V
Max. Power Supply Voltage		± 18 V
Power Supply Current	Max.	± 100 mA
Operating Ambient Temperature		0 $^{\circ}$ C to +40 $^{\circ}$ C
Storage Temperature		-15 $^{\circ}$ C to +60 $^{\circ}$ C
Weight		Approx. 165 g

NOTE: ^(A)Load Resistance: 50 Ω

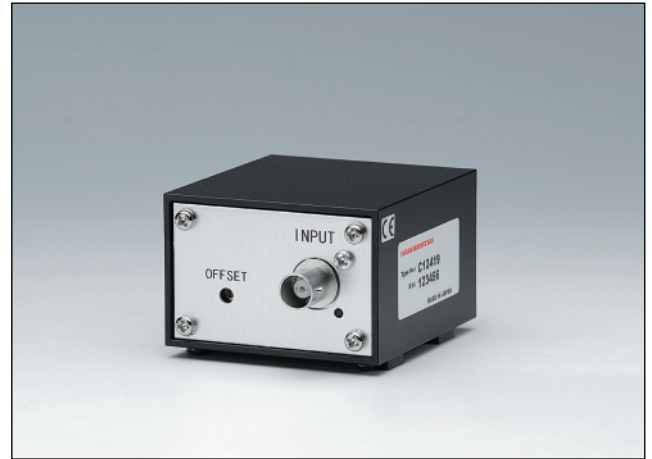
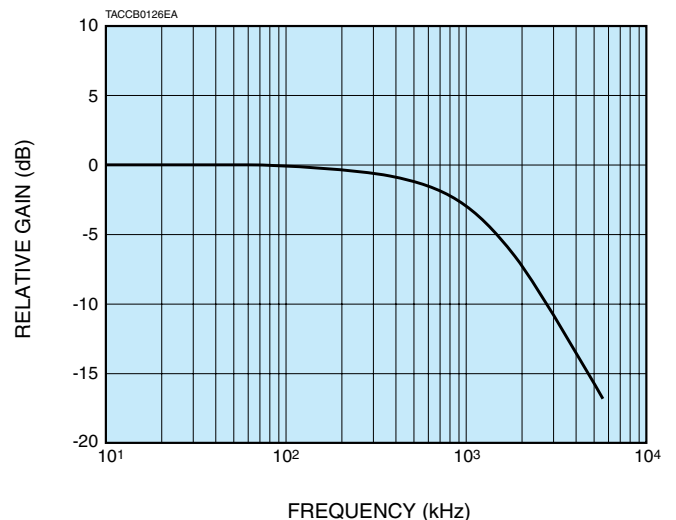
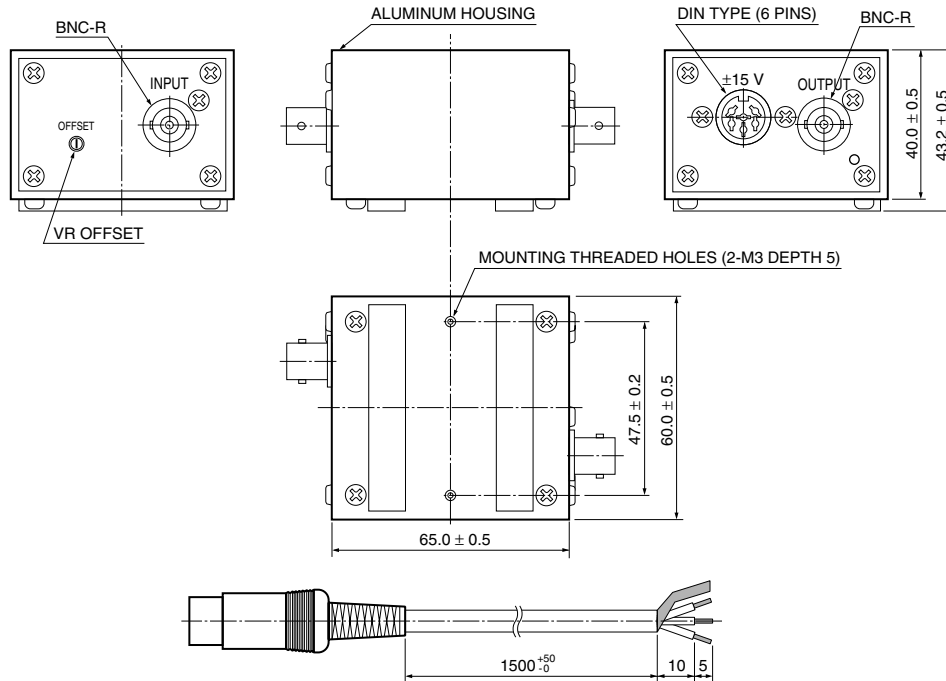


Figure 1: Typical Frequency Response



AMPLIFIER UNIT C12419

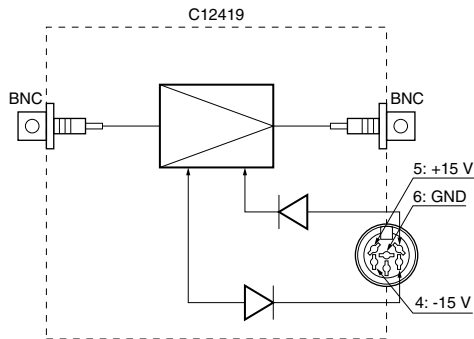
Figure 2: Dimensional Outlines (Unit: mm)



Power cable with connector (6 pin DIN type) is supplied with the C12419.

TACCA0318EA

Figure 3: Internal Connection Diagram



TACCC0160EA

CONNECTOR PIN	WIRE COLOR	CONNECTION
1	—	—
2	—	—
3	—	—
4	White	-15 V
5	Red	+15 V
6	Black	GND
External Conductor	Green	GND

RELATED PRODUCTS

AMPLIFIER UNITS SELECTION GUIDE

Parameter	C7319	C12419	C9999	C6438 C6438-01 C6438-02	C9663	C11184	C5594
Frequency Bandwidth (-3 dB)	DC to 20 kHz or DC to 200 kHz (switchable)	DC to 1 MHz	DC to 10 MHz	DC to 50 MHz	DC to 150 MHz	DC to 300 MHz	50 kHz to 1.5 GHz
Current-to-Voltage Conversion Factor (Load Resistance: 50 Ω)	-0.1 V/μA -1 V/μA, -10 V/μA (switchable) *	-1 V/μA *	+50 mV/μA	+0.5 mV/μA (C6438) +25 mV/μA (C6438-01) +5 mV/μA (C6438-02)	+4 mV/μA	+1.25 mV/μA	+3.15 mV/μA

* Load Resistance: 10 kΩ

Refer to the individual catalogs for detailed information.

HAMAMATSU PHOTONICS K.K. www.hamamatsu.com

HAMAMATSU PHOTONICS K.K., Electron Tube Division

314-5, Shimokanzo, Iwata City, Shizuoka Pref., 438-0193, Japan, Telephone: (81)539/62-5248, Fax: (81)539/62-2205

U.S.A.: Hamamatsu Corporation: 360 Foothill Road, P. O. Box 6910, Bridgewater, N.J. 08807-0910, U.S.A., Telephone: (1)908-231-0960, Fax: (1)908-231-1218 E-mail: usa@hamamatsu.com

Germany: Hamamatsu Photonics Deutschland GmbH: Arzbergerstr. 10, D-82211 Herrsching am Ammersee, Germany, Telephone: (49)8152-375-0, Fax: (49)8152-2658 E-mail: info@hamamatsu.de

France: Hamamatsu Photonics France S.A.R.L.: 19, Rue du Saule Trapu, Parc du Moulin de Massy, 91882 Massy Cedex, France, Telephone: (33)1 69 53 71 00, Fax: (33)1 69 53 71 10 E-mail: infos@hamamatsu.fr

United Kingdom: Hamamatsu Photonics UK Limited: 2 Howard Court, 10 Tewin Road Welwyn Garden City Hertfordshire AL7 1BW, United Kingdom, Telephone: 44-(0)1707-294888, Fax: 44(0)1707-325777 E-mail: info@hamamatsu.co.uk

North Europe: Hamamatsu Photonics Norden AB: Thorshamnsgatan 35 SE-164 40 Kista, Sweden, Telephone: (46)8-509-031-00, Fax: (46)8-509-031-01 E-mail: info@hamamatsu.se

Italy: Hamamatsu Photonics Italia: S.R.L.: Strada della Moia, 1/E, 20020 Arese, (Milano), Italy, Telephone: (39)02-935 81 733, Fax: (39)02-935 81 741 E-mail: info@hamamatsu.it

China: Hamamatsu Photonics (China) Co., Ltd.: 1201 Tower B, Jiaming Center, 27 Dongsanhuan Road North, Chaoyang District, Beijing 100020, China, Telephone: (86)10-6586-6008, Fax: (86)10-6586-2866 E-mail: hpc@hamamatsu.com.cn

TACC1058E02

SEPT. 2013 IP