

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

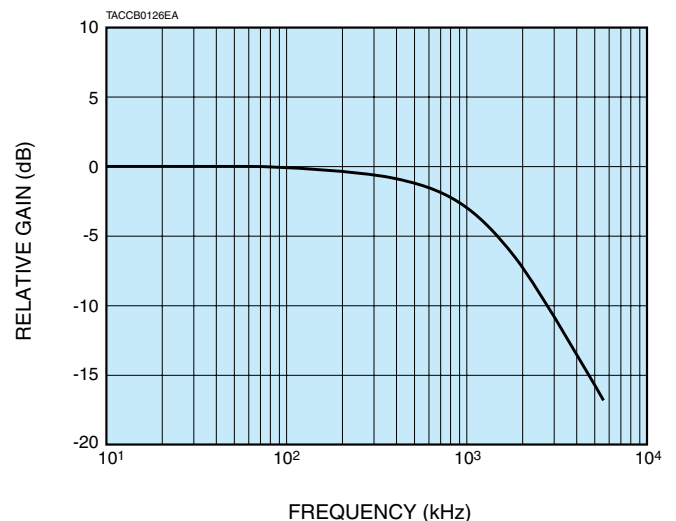


SPECIFICATIONS

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
Amplifying method		Inverting output
Output impedance		50 Ω
Maximum output signal voltage	Load resistance: 1 k Ω	\pm 11 V Min.
	Load resistance: 50 Ω	\pm 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		\pm 15 V
Max. power supply voltage		\pm 18 V
Power supply current	Max.	\pm 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

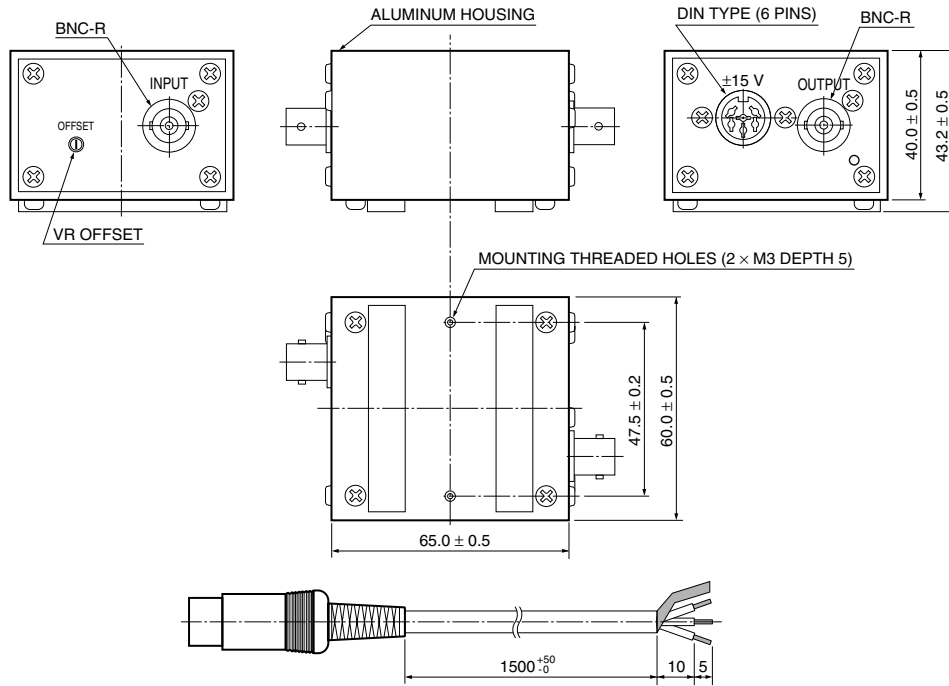
NOTE: (A) Load resistance: 50 Ω

Figure 1: Typical frequency response



AMPLIFIER UNIT C12419

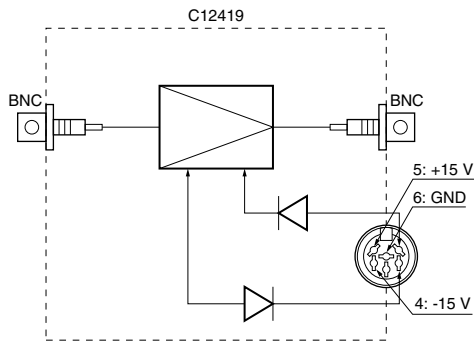
Figure 2: Dimensional outlines (Unit: mm)



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

TACCA0318EB

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 C9999-01	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 (C9999) ±10 mV/μA (C9999-01)	+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 ** Load resistance: 1 kΩ

Refer to the individual catalogs for detailed information.

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FEB. 2017 IP