

C6438 is a wide bandwidth, DC to 50 MHz, amplifier. While providing the photomultiplier tube output current directly to C6438 input connector, it provides the voltage output signal in the conversion coefficient of 10 mV/10 μ A. It can be used as a wide bandwidth amplifier not only for a photomultiplier tube but also for other detectors, or simply as a wide bandwidth amplifier.

MAXIMUM RATINGS (Absolute Maximum Values)

Parameter	Description/Value
Input Voltage	± 6 V dc
Operating Temperature	0 °C to +40 °C
Storage Temperature	-10 °C to +60 °C

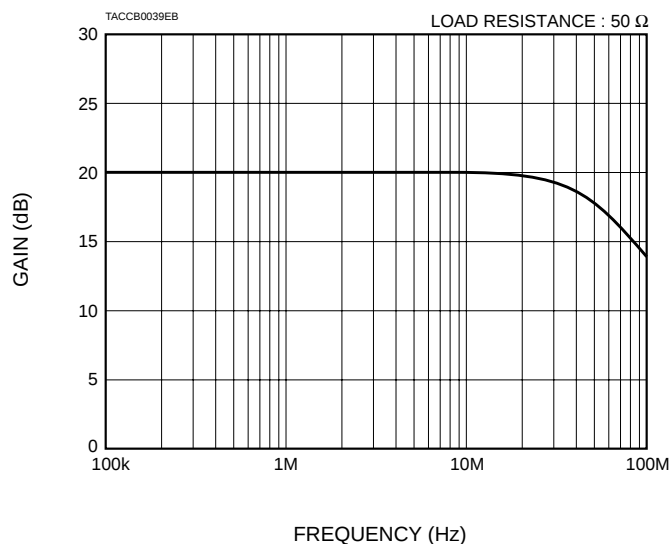
SPECIFICATIONS

Parameter	Description/Value
Gain (Frequency: DC to 50 MHz, Load Resistance: 50 Ω)	20 dB $\pm$ 3 dB (Approx. 10 times)
Frequency Bandwidth (-3 dB)	DC to 50 MHz
Rise Time	7 ns Typ.
Input Polarity	Positive/Negative
Amplifying Method	Non-inverting Output
Input/Output Impedance	50 Ω
Maximum Output Voltage	Load Resistance: 1 M Ω 2.0 V Min. Load Resistance: 50 Ω 1.0 V Min.
Output Offset Voltage (Load Resistance: 50 Ω)	0.5 mV Typ.
Output Noise Voltage (Load Resistance: 50 Ω)	0.5 mV rms Max. (at 50 MHz)
Output Offset Drift (0 °C to +40 °C)	0.06 mV/°C
Input Voltage/Current	± 5 V dc/ ± 20 mA Typ.
Weight	160 g

FEATURES

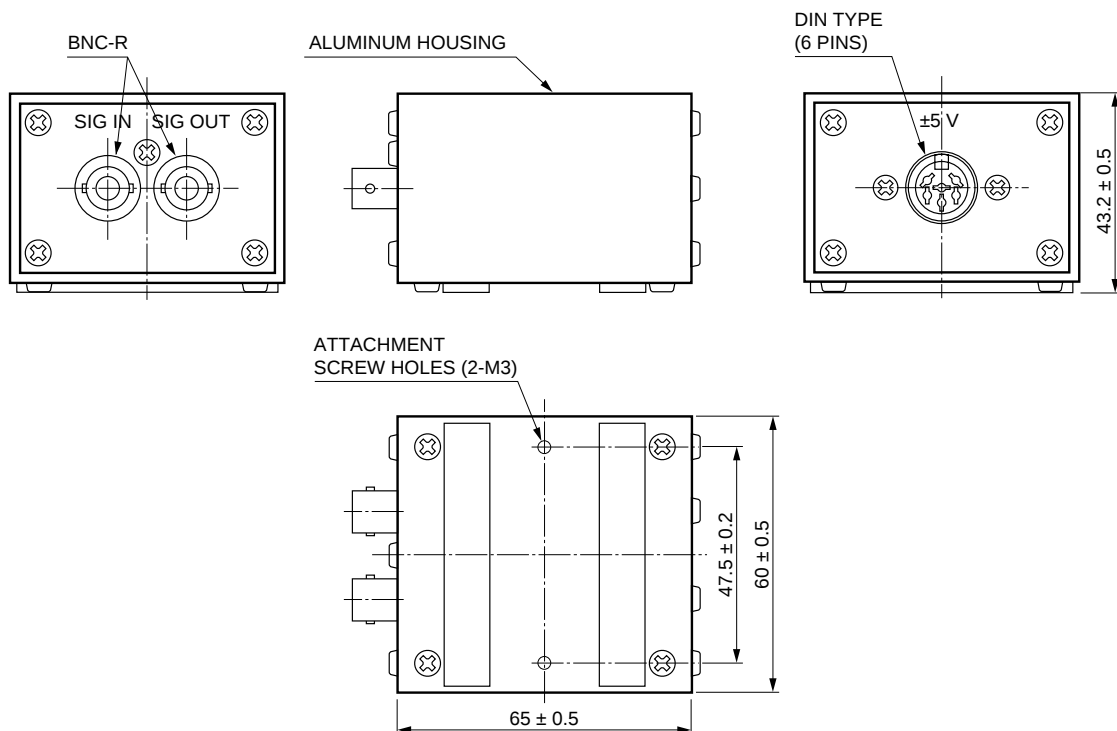
- Wide Bandwidth: DC to 50 MHz
- Rise Time: 7 ns Typ.
- Gain: 20 dB $\pm$ 3 dB (Approx. 10 Times)
- Non-inverting Output
- Compact · Light weight

Figure 1: Gain vs. Frequency Characteristic



WIDE BANDWIDTH AMPLIFIER C6438

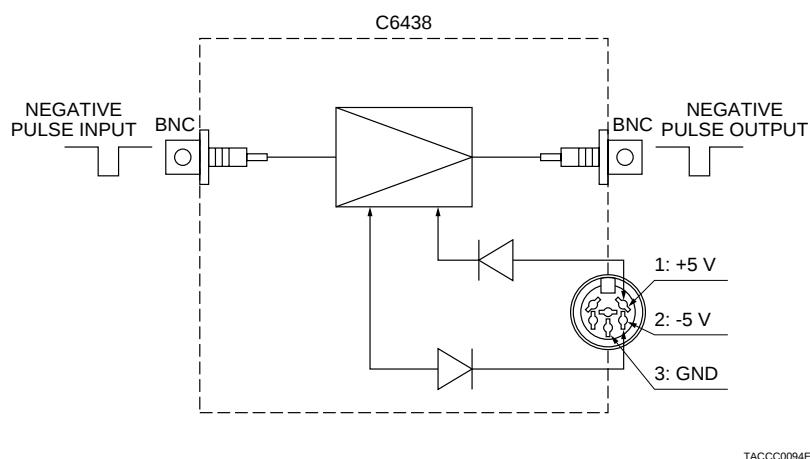
Figure 2: Dimensional Outline (Unit: mm)



※ Exclusive cable with a plug connector attached at one end will be provided for ± 5 V supply connection together with the unit.

TACCA0134EA

Figure 3: Internal Connection Diagram



TACCC0094EB

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

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HAMAMATSU PHOTONICS K.K., Electron Tube Center

314-5, Shimokanzo, Toyooka-village, Iwata-gun, Shizuoka-ken, 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.: 8, Rue du Saule Trappu, 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: france@hamamatsu.com

United Kingdom: Hamamatsu Photonics UK Limited: Lough Point, 2 Gladbeck Way, Windmill Hill, Enfield, Middlesex EN2 7JA, United Kingdom, Telephone: 44(20)8-367-3560, Fax: 44(20)8-367-6384 E-mail: info@hamamatsu.co.uk

North Europe: Hamamatsu Photonics Norden AB: Smidesvägen 12, SE-171-41 SOLNA, 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

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