

The output signal from a photomultiplier tube can be directly input to the C6438 and it provides a voltage output signal with 50 Ω load at a conversion factor of 0.5 mV/μA.

## FEATURES

- Wide Bandwidth: DC to 50 MHz
- Current-to-voltage Conversion Factor:  
0.5 mV/μA at 50 Ω load resistance
- Rise Time: 7 ns (Typ.)
- Non-inverting Output
- Compact · Light Weight

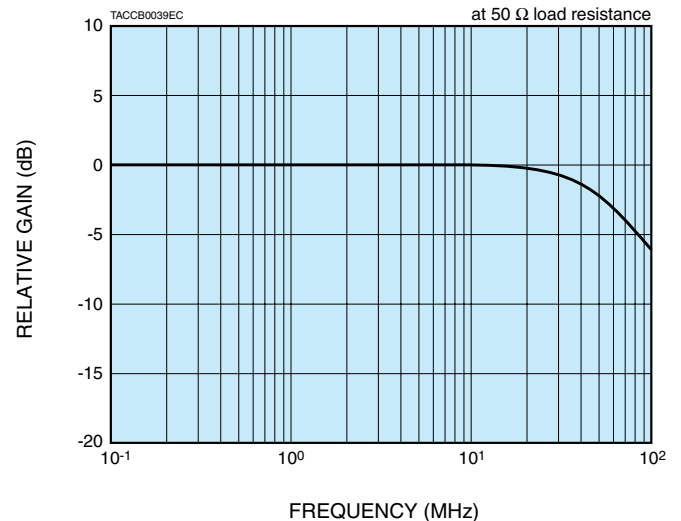
## SPECIFICATIONS

Parameter		Description / Value
Frequency Bandwidth (-3 dB)		DC to 50 MHz
Voltage Gain <sup>(A)</sup>		20 dB ± 3 dB (Approx. 10 times)
Current-to-voltage Conversion Factor	Load Resistance: 1 MΩ	1 mV/μA
	Load Resistance: 50 Ω	0.5 mV/μA
Rise Time	Typ.	7 ns
Input Polarity		Positive / Negative
Amplifying Method		Non-inverting Output
Input Impedance		50 Ω
Recommended Load Resistance		50 Ω
Maximum Output Signal Voltage	Load Resistance: 1 MΩ	±2.0 V Min.
	Load Resistance: 50 Ω	±1.0 V Min.
Output Offset Voltage <sup>(A)</sup>	Typ.	0.5 mV
Output Noise Voltage <sup>(A)</sup>	Max.	0.5 mV rms
Connector	Input	BNC-R
	Output	BNC-R
	Power	DIN (6-pin)
Power Supply Voltage		±5 V
Max. Power Supply Voltage		±6 V
Power Supply Current	Max.	±55 mA
Operating Temperature		0 °C to +40 °C
Storage Temperature		-10 °C to +60 °C
Weight		Approx. 160 g

NOTE: <sup>(A)</sup>Load Resistance: 50 Ω

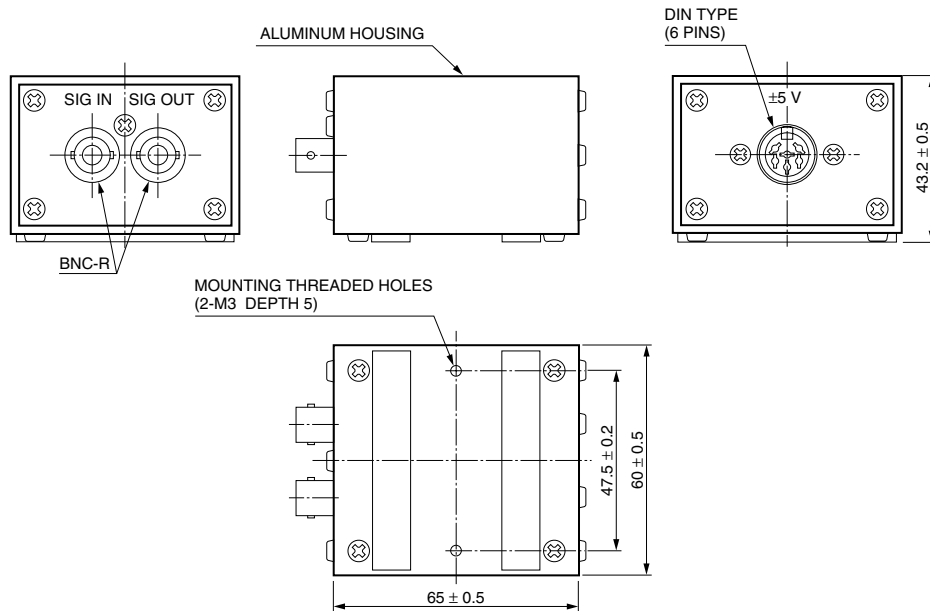


Figure 1: Typical Frequency Response



# WIDE BANDWIDTH AMPLIFIER UNIT C6438

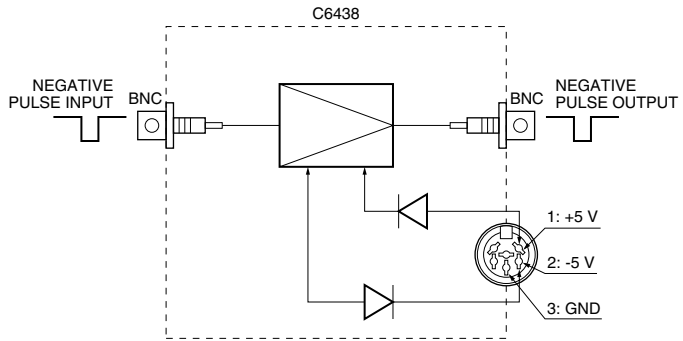
Figure 2: Dimensional Outline (Unit: mm)



\* Power cable with a plug connector attached at one end is supplied with the C6438.

TACCA0134EB

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

## RELATED PRODUCTS

### AMPLIFIER UNITS SELECTION GUIDE

Parameter	C7319	C9999	C6438	C6438-01	C9663	C11184	C5594
Frequency Bandwidth (-3 dB)	DC to 20 kHz or DC to 200 kHz (switchable)	DC to 10 MHz	DC to 50 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)	50 mV/μA	0.5 mV/μA	25 mV/μA	4 mV/μA	1.25 mV/μA	3.15 mV/μA

Refer to the individual catalogs for detailed information.

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