

MCP

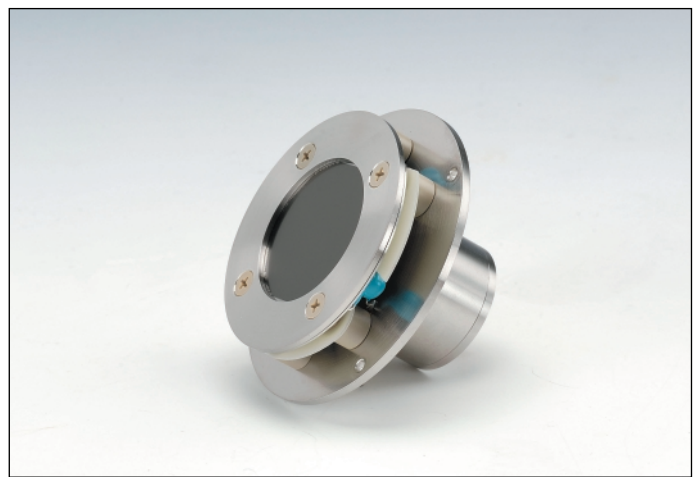
MCP ASSEMBLY

F9892-31/-32

HIGH TIME RESOLUTION TOF-MS DETECTOR HIGH VOLTAGE FLOATING OPERATION

FEATURES

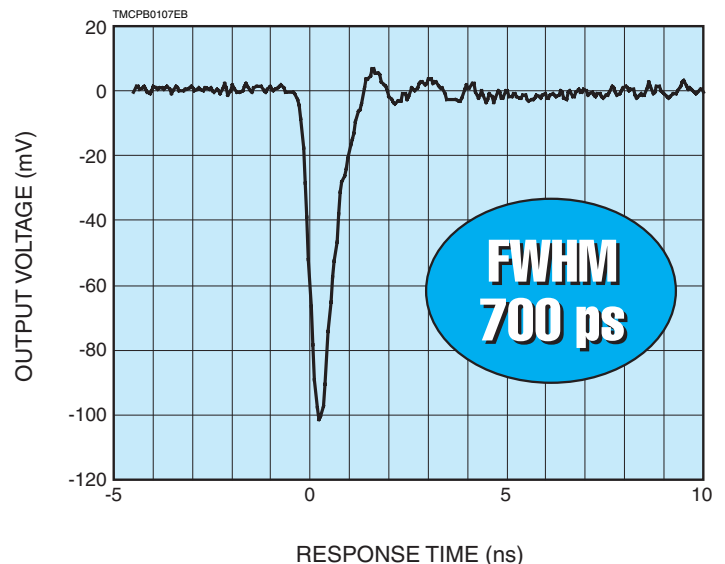
- **High voltage floating operation**
MCP-IN ± 10 kV
- **Fast time response**
700 ps Typ. (FWHM)
- **Large effective area**
 $\phi 42$ mm
- **Excellent MCP flatness**
 ± 10 μ m Typ.
- **Robust MCP**
- **Small ringing**



OVERVIEW

The F9892-31/-32 are ideal detectors with a large effective area for TOF-MS (Time of Flight Mass Spectrometry). Our own advanced technology in optimizing the assembly design with a flat MCP allows excellent time resolution of 700 ps (FWHM) with negligible ringing at both ± 10 kV high voltage floating operation.

Figure 1: Typical Output Waveform (F9892-32)



SPECIFICATIONS

GENERAL

Parameter	F9892-31	F9892-32	Unit
MCP Channel Diameter	12	6	μm
Bias Angle		12	degree
Effective Area		φ42	mm
Assembly Outer Size		φ92	mm
Assembly Height Size	64.7	64.4	mm
Number of MCPs		2	—

TYPICAL ELECTRICAL CHARACTERISTICS (Supply Voltage: 2 kV, Vacuum: 1.3×10^{-4} Pa, Operating Ambient Temperature: +25 °C)

Parameter	F9892-31	F9892-32	Unit
Gain (Min.)		1×10^6	—
Resistance		16 to 64	MΩ
Dark Count (Max.)		3	$s^{-1} \cdot cm^{-2}$
Pulse Width (FWHM) (TYP.)		700	ps

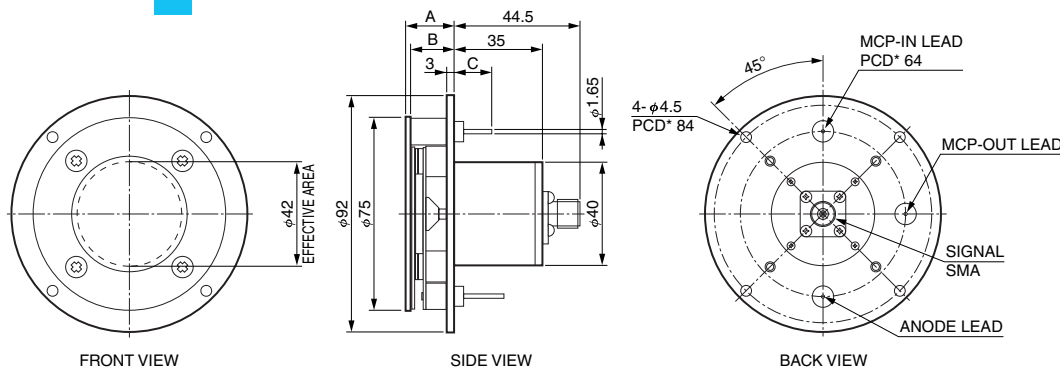
RATINGS

Parameter	F9892-31	F9892-32	Unit
MCP Supply Voltage (Max.)		2.0	kV
MCP-OUT to Anode Supply Voltage (Max.)		0.5	kV
MCP-IN Supply Voltage (Max.)		±10	kV
Operating Vacuum Condition (Max.)		1.3×10^{-4} ^(A)	Pa

NOTE: (A) Better vacuum than 1.3×10^{-4} Pa.

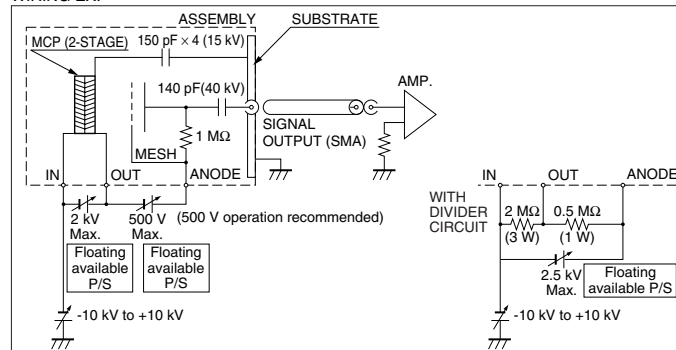
DIMENSIONAL OUTLINES (Unit: mm)

*: PCD (Pitch Circle Diameter)



Type No.	A	B	C		
			MCP-IN LEAD	MCP-OUT LEAD	ANODE LEAD
F9892-31	20.2	18.2	13.5	15.2	19.4
F9892-32	19.9	17.9	13.9	15.2	19.4

WIRING EX.



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