

### High-speed response MCP assembly ideal for high resolution TOF-MS detector Incorporates a two-stage MCP with 4 $\mu$ m channel diameter

The F4655-13 MCP assembly is an ideal detector for high resolution TOF-MS (time-of-flight mass spectroscopy) because of a two-stage MCP with 4 $\mu$ m channel diameter. Our own advanced technology in optimizing MCP design allows obtaining an excellent output waveform with negligible ringing even when detecting very high-speed signals. The dimensions are exactly the same as the F4655-10 MCP assembly, ensuring a compact configuration and easy handling.



TMCPF0088

#### FEATURES

- Excellent time response
- 50 $\Omega$  impedance matching
- Compact and lightweight

#### APPLICATION

- TOF-MS (Time-of-flight mass spectrometer)

#### SPECIFICATIONS

##### GENERAL

Parameter	Value	Unit
Assembly Outer Diameter	38.0	mm
Effective Diameter	14.5	mm
Maximum Height	31.9	mm
MCP Channel Diameter	4	$\mu$ m
Number of MCP Stages	2	-

##### MAXIMUM RATINGS (Absolute values)

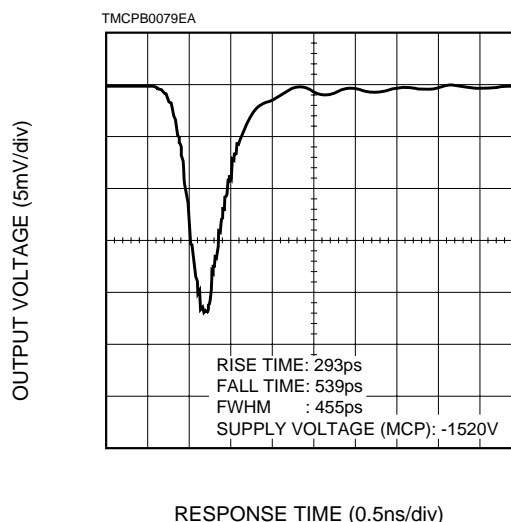
MCP Supply Voltage (In-Out)	2	kV
MCP-Out to Anode Voltage	0.5	kV
Electric Potential at Each Terminal	MCP-In: -2.5 MCP-Out: -0.5 Anode: GND	kV
Operating Vacuum Condition	$6.7 \times 10^{-4}$ ( $5 \times 10^{-6}$ )	Pa (Torr)
Baking Temperature	- *	$^{\circ}$ C
Baking Time	- *	h
Baking Vacuum Condition	- *	Pa (Torr)

\* Baking cannot be performed.

##### CHARACTERISTICS (at $1.3 \times 10^{-4}$ Pa ( $1 \times 10^{-6}$ Torr), $T_a = +25^{\circ}$ C)

Gain at 2.0kV	$1 \times 10^6$	-
Plate Resistance per MCP	10 to 100	M $\Omega$
Dark Count at 2.0kV	5	cps/cm <sup>2</sup>

Figure 1: Typical Output Waveform

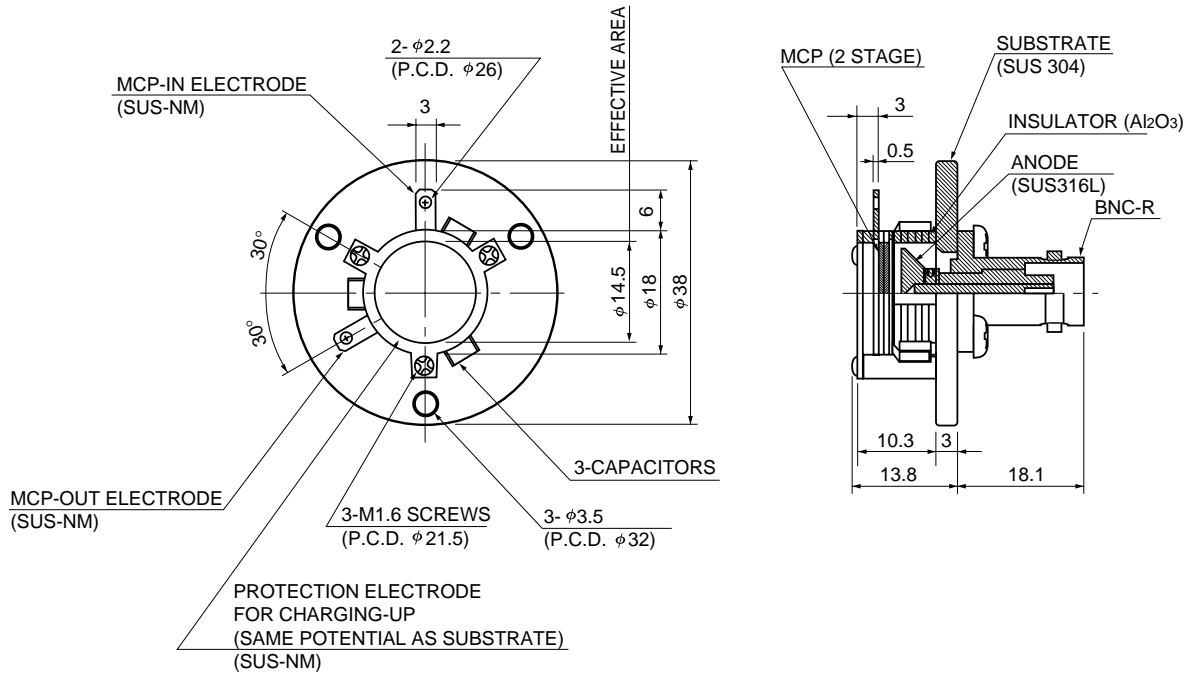


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# MCP ASSEMBLY FOR HIGH RESOLUTION TOF-MS F4655-13

Figure 2: Dimensional Outlines (Unit: mm)



TMCPA0044EA

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