

***Suitable for high current measurement of power devices***

## SS-280A Series

Max. frequency **30MHz**, Temperature Range **-40°C to 125°C**, Max. Peak Voltage **1.2kV**, Cable length **1.5m**

|                            |                            |                             |                             |                             |                               |                               |
|----------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------------|-------------------------------|
| <b>30A peak</b><br>SS-281A | <b>60A peak</b><br>SS-282A | <b>120A peak</b><br>SS-283A | <b>300A peak</b><br>SS-284A | <b>600A peak</b><br>SS-285A | <b>1,200A peak</b><br>SS-286A | <b>3,000A peak</b><br>SS-287A |
|----------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------------|-------------------------------|

## SS-290 Series (Made to order)

Max. frequency **20MHz**(SS-290S)  
**10MHz**(SS-290L) Temperature Range **-40°C to 125°C**, Max. Peak Voltage **10kV**, Cable length **3m**

|                                         |                                         |                                         |                                          |
|-----------------------------------------|-----------------------------------------|-----------------------------------------|------------------------------------------|
| <b>1,200A peak</b><br>SS-293S / SS-293L | <b>3,000A peak</b><br>SS-294S / SS-294L | <b>6,000A peak</b><br>SS-295S / SS-295L | <b>12,000A peak</b><br>SS-296S / SS-296L |
|-----------------------------------------|-----------------------------------------|-----------------------------------------|------------------------------------------|

### ■ SS-290 Series



### ■ SS-280A Series



**SS-280A Sensor part**



**SS-290 Sensor part**

## SS-280A Series Specifications

| Basic Specifications         | Model                                     |                                                                                             | Frequency Bandwidth                                                                       | Sensor part temperature range | Sensitivity [mV/A] | Peak Current [A] | Peak di/dt [kA/μs] | Cut-off frequency fL[Hz] | Noise [mV rms] | Absolute Maximum di/dt |            |     |
|------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------|--------------------|------------------|--------------------|--------------------------|----------------|------------------------|------------|-----|
|                              |                                           |                                                                                             |                                                                                           |                               |                    |                  |                    |                          |                | Peak[kA/μs]            | RMS[kA/μs] |     |
| Sensitivity and peak current |                                           | SS-281A                                                                                     | fL to 30MHz[-3dB]<br>fL: lower cut-off frequency                                          | -40℃ to 125℃                  | 200                | 30               | 2                  | 110                      | 3.5            | 80                     | 1          |     |
|                              |                                           | SS-282A                                                                                     |                                                                                           |                               | 100                | 60               | 4                  | 65                       | 2.5            |                        |            |     |
|                              |                                           | SS-283A                                                                                     |                                                                                           |                               | 50                 | 120              | 8                  | 32                       | 2              |                        | 1.8        | 1.5 |
|                              |                                           | SS-284A                                                                                     |                                                                                           |                               | 20                 | 300              | 20                 | 9                        |                |                        |            |     |
|                              |                                           | SS-285A                                                                                     |                                                                                           |                               | 10                 | 600              | 40                 | 6                        |                |                        |            |     |
|                              |                                           | SS-286A                                                                                     |                                                                                           |                               | 5                  | 1200             | 80                 | 3                        |                |                        |            |     |
|                              |                                           | SS-287A                                                                                     |                                                                                           |                               | 2                  | 3000             | 80                 | 2                        | 1.4            |                        | 2          |     |
| Accuracy                     |                                           | ±2%(-10℃ to +70℃ add ±250ppm/℃ when out of the range in the left )                          |                                                                                           |                               |                    |                  |                    |                          |                |                        |            |     |
| Output                       | Connector Type                            | Connector : BNC                                                                             |                                                                                           |                               |                    |                  |                    |                          |                |                        |            |     |
|                              | Voltage                                   | ±6V(load ≥ 100kΩ) * Output becomes ±2V and sensitivity becomes about the half for 50Ω load. |                                                                                           |                               |                    |                  |                    |                          |                |                        |            |     |
| Typical Linearity            |                                           | ±0.05% of full-scale                                                                        |                                                                                           |                               |                    |                  |                    |                          |                |                        |            |     |
| Zero Point Adjustment Aanges |                                           | ±300mV or more                                                                              |                                                                                           |                               |                    |                  |                    |                          |                |                        |            |     |
| Coil (Sensor Part)           | Coil Length                               |                                                                                             | 80mm±5mm (60mm coil length is also available. Please ask our sales office.)               |                               |                    |                  |                    |                          |                |                        |            |     |
|                              | Coil Thickness                            |                                                                                             | Max. 1.7mm                                                                                |                               |                    |                  |                    |                          |                |                        |            |     |
|                              | Peak Voltage Isolation                    |                                                                                             | 1.2kV peak (CAT I), 1.0kV peak (CAT II)                                                   |                               |                    |                  |                    |                          |                |                        |            |     |
|                              | Cable Length                              |                                                                                             | 1.5m ±50mm                                                                                |                               |                    |                  |                    |                          |                |                        |            |     |
|                              | Temperature Range                         |                                                                                             | -40℃ to 125℃(Including sensor and cable)                                                  |                               |                    |                  |                    |                          |                |                        |            |     |
|                              | Dimensions                                |                                                                                             | Approx. 80(W) x 165(H) x 35(D) mm (Without the external projection portion)               |                               |                    |                  |                    |                          |                |                        |            |     |
| Mainframe (Amplifier)        | Weight                                    |                                                                                             | Approx. 0.37kg                                                                            |                               |                    |                  |                    |                          |                |                        |            |     |
|                              | Power Supply                              |                                                                                             | Four AA dry batteries, Approx. 18 hours with alkaline batteries                           |                               |                    |                  |                    |                          |                |                        |            |     |
|                              | Accessories                               |                                                                                             | BNC Cable (1), Instruction Manual(1), Screw Driver(1), Hand Case(1), AA dry batteries(4 ) |                               |                    |                  |                    |                          |                |                        |            |     |
| Environmental conditions     | Operating temperature and humidity ranges |                                                                                             | 0℃ to +40℃, 80%RH or less(Except for the sensor)                                          |                               |                    |                  |                    |                          |                |                        |            |     |
|                              | Storage temperature and humidity ranges   |                                                                                             | -10℃ to +60℃, 80%RH or less                                                               |                               |                    |                  |                    |                          |                |                        |            |     |
|                              | Operating Altitude                        |                                                                                             | ≤2,000m at ≤25℃                                                                           |                               |                    |                  |                    |                          |                |                        |            |     |

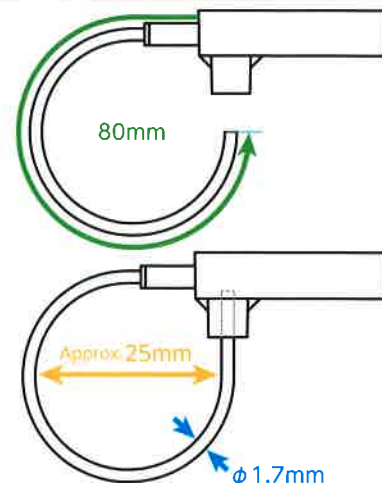
### SS-280A Series Sensor Part

80mm

Approx. 25mm

φ 1.7mm

SS-280A Series Sensor Part



## SS-290 Series Specifications

| Basic Specifications         | Model                                     |                                                                    | Frequency Bandwidth                                                                          | Sensor part temperature range | Sensitivity [mV/A] | Peak Current [kA] | Peak di/dt [kA/μs] | LF cut off frequency fL[Hz] | Noise [mV rms] | Absolute Maximum di/dt |            |
|------------------------------|-------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-------------------------------|--------------------|-------------------|--------------------|-----------------------------|----------------|------------------------|------------|
|                              |                                           |                                                                    |                                                                                              |                               |                    |                   |                    |                             |                | Peak[kA/μs]            | RMS[kA/μs] |
| Sensitivity and peak current |                                           | SS-293S                                                            | SS-290S :<br>fL to 20MHz[-3dB]                                                               | -40℃ to<br>125℃               | 5                  | 1.2               | 60                 | 1                           | 3.5            | 80                     | 3.0        |
|                              |                                           | SS-293L                                                            |                                                                                              |                               |                    |                   | 32                 |                             |                |                        |            |
|                              |                                           | SS-294S                                                            |                                                                                              |                               | 2                  | 3                 | 80                 | 0.8                         | 2.0            |                        |            |
|                              |                                           | SS-294L                                                            |                                                                                              |                               |                    |                   |                    |                             |                |                        |            |
|                              |                                           | SS-295S                                                            | 1                                                                                            |                               | 6                  | 0.6               |                    | 1.4                         |                |                        |            |
|                              |                                           | SS-295L                                                            |                                                                                              |                               |                    |                   |                    |                             |                |                        |            |
|                              |                                           | SS-296S                                                            | 0.5                                                                                          |                               | 12                 | 0.4               | 1.2                |                             |                |                        |            |
|                              |                                           | SS-296L                                                            |                                                                                              |                               |                    |                   |                    |                             |                |                        |            |
| Accuracy                     |                                           | ±2%(-10℃ to +60℃ add ±300ppm/℃ when out of the range in the left ) |                                                                                              |                               |                    |                   |                    |                             |                |                        |            |
| Output                       | Connector Type                            | Connector : BNC                                                    |                                                                                              |                               |                    |                   |                    |                             |                |                        |            |
|                              | Voltage                                   | ±6V(load ≥ 100kΩ)                                                  |                                                                                              |                               |                    |                   |                    |                             |                |                        |            |
| Typical Linearity            |                                           | ±0.05% of full-scale                                               |                                                                                              |                               |                    |                   |                    |                             |                |                        |            |
| Zero Point Adjustment Ranges |                                           | ±300mV or more                                                     |                                                                                              |                               |                    |                   |                    |                             |                |                        |            |
| Coil (Sensor Part)           | Coil Length                               |                                                                    | SS-290S : 300mm±10mm, SS-290L : 700mm±10mm                                                   |                               |                    |                   |                    |                             |                |                        |            |
|                              | Coil Thickness                            |                                                                    | Max. 8.5mm                                                                                   |                               |                    |                   |                    |                             |                |                        |            |
|                              | Peak Voltage Isolation                    |                                                                    | 10kV peak                                                                                    |                               |                    |                   |                    |                             |                |                        |            |
|                              | Cable Length                              |                                                                    | 3.0m ±100mm                                                                                  |                               |                    |                   |                    |                             |                |                        |            |
|                              | Temperature Range                         |                                                                    | -40℃ to 125℃(Including sensor and cable)                                                     |                               |                    |                   |                    |                             |                |                        |            |
| Mainframe (Amplifier)        | Dimensions                                |                                                                    | Approx. 80(W) x 165(H) x 35(D) mm (Without the external projection portion)                  |                               |                    |                   |                    |                             |                |                        |            |
|                              | Weight                                    |                                                                    | SS-290S : Approx. 0.48kg, SS-290L : Approx. 0.5kg                                            |                               |                    |                   |                    |                             |                |                        |            |
|                              | Power Supply                              |                                                                    | Four AA dry batteries, Approx. 30 hours with alkaline batteries                              |                               |                    |                   |                    |                             |                |                        |            |
|                              | Accessories                               |                                                                    | BNC Cable (1), Instruction Manual(1), Screw Driver(1), Hand Case(1),AA dry batteries : ( 4 ) |                               |                    |                   |                    |                             |                |                        |            |
| Environmental conditions     | Operating temperature and humidity ranges |                                                                    | 0℃ to +40℃, 80%RH or less(Except for the sensor)                                             |                               |                    |                   |                    |                             |                |                        |            |
|                              | Storage temperature and humidity ranges   |                                                                    | -10℃ to +60℃, 80%RH or less                                                                  |                               |                    |                   |                    |                             |                |                        |            |
|                              | Operating Altitude                        |                                                                    | ≤2,000m at ≤25℃                                                                              |                               |                    |                   |                    |                             |                |                        |            |

### SS-290 Series Sensor Part

SS-290L Type

Approx.220mm

700mm

φ 8.5mm

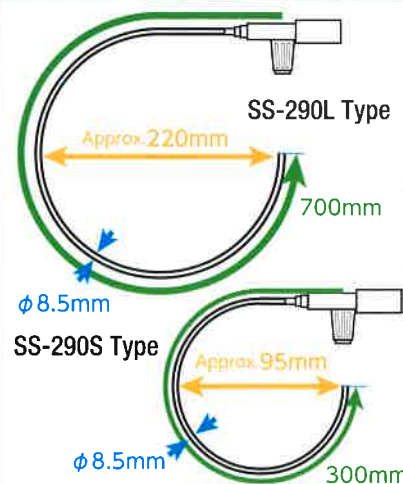
SS-290S Type

Approx.95mm

300mm

φ 8.5mm

SS-290 Series Sensor Part



\*: The products shown in this catalogue are current models at the date of publication. Design and specification are subject to change without notice for improvement.

\*: Some of the products are Regulated Products subject to the ForeignExchange and Foreign Trade Control Law of Japan. Export should not be allowed without appropriate governmental authorization. Please ask our sales office whether the product concerned is a Regulated Product(s).

**IWATSU**

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