![Tektronix logo]

80A02 EOS/ESD Isolation Module for the DSA8300
Datasheet

The 80A02 EOS/ESD Isolation module protects the sampling bridge of Tektronix DSA8300 [1] electrical sampling module inputs from damage due to electro-overstress (EOS) and electrostatic discharge (ESD) from circuit boards and cables. The 80A02 is for applications such as electrical TDR circuit board testing and cable testing where large static charges can be stored in the DUT.

Key features

- Single-channel electrostatic discharge (ESD) and electro-overstress (EOS) damage protection for Tektronix DSA8300 electrical sampling modules

- Plugs into and is powered from sampling mainframe

- Compatible with Tektronix extender cables

- <37 ps reflected rise time when used with 80E04 or SD24 electrical sampling TDR modules

Applications

- Electrical sampling module input isolation for high-speed electrical signal analysis

- Circuit-board controlled impedance testing (TDR)

The 80A02

The 80A02 plugs into any available electrical sampling module plug-in slot of the DSA/TDS/CSA8K Series, legacy CSA11K Series, or legacy CSA803 Series sampling oscilloscopes.

The 80A02 provides a front-panel SMA connector to connect the SMA test cable or probe signal from the DUT. The 80A02 passes the acquired DUT signal to a connected electrical sampling module input for measurement after an actuating control (from the matching P80318 or P8018 high-performance probe, or customer-provided external switch, TTL, or CMOS control logic input) signals the 80A02 that the DUT has been grounded to discharge any electrostatic charge remaining in the DUT.

When used with either matching P80318 or P8018 20 GHz handheld probe (with probe tip pressure actuating feature) the 80A02 provides a superior technique and performance capability for electrical sampling module EOS/ESD protection of acquired electrical signal and TDR measurement. (See P80318 or P8018 product description.)

You can combine the 80A02 with an 80A09 ESD Protection device to further protect sensitive module inputs from voltage spikes that can occur from operator error during highly repetitive tasks. See the 80A09 datasheet for more information (85W-30138-xx). [2]

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[1]   Also compatible with DSA8200, TDS/CSA8200, TDS/CSA8000B, and TDS/CSA8000 sampling oscilloscopes.

[2]   The 80A09 is not intended for use in applications where long-duration high-voltage spikes occur, such as in PCB manufacturing and cable test. Use the 80A02 EOS/ESD Isolation Module for these conditions (alone or in combination with an 80A09).

Specifications

All specifications are guaranteed unless noted otherwise.

Bandwidth	>25 GHz
Applicable mainframes	DSA8300 Series, DSA8200 Series, TDS8000 Series, CSA8000 Series, CSA11800 Series, CSA803 Series
Connector type	SMA female
Manual control input	Open circuit for DUT discharging standby state; Closed circuit (<100 kΩ to ground) for measurement
Automated control input	Open circuit or logic low (<0.3 V) for DUT discharging; Closed circuit or logic high (>1.0 V) for measurement
Control signal connector	Audio stereo phone mini-jack
Switching time, typical	20 ms

Ordering information

Models

80A02	EOS/ESD Isolation Module, single channel

Standard accessories

071-1317-xx	80A02 user manual
015-1022-01	SMA 50 Ω termination cap
174-4878-xx	20 GHz SMA cable, 12 inches

Recommended accessories

174-5230-xx	SlotSaver Adapter Extender Cable. Provides power and control to the 80A02 when operated externally from the DSA/TDS/CSA mainframe, saving slot space (compatible with 80A06 [3] and 80A02).

Warranty

90 days.

CE

Tektronix is registered to ISO 9001 and ISO 14001 by SRI Quality System Registrar.

Product Area Assessed: The planning, design/development and manufacture of electronic Test and Measurement instruments.

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[3] Not compatible with DSA8300.

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For Further Information. Tektronix maintains a comprehensive, constantly expanding collection of application notes, technical briefs and other resources to help engineers working on the cutting edge of technology. Please visit www.tek.com.

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