

# EOS/ESD Protection Module for the DSA8300\*1

## 80A02 Data Sheet



### Features & Benefits

- Single-channel Electrostatic Discharge (ESD) and Electro-overstress (EOS) Damage Protection for Tektronix 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 Protection for High-speed Electrical Signal Analysis
- Circuit-board Controlled Impedance Testing (TDR)

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

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 for connecting 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) which 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.)

\*1 Also compatible with DSA8200, TDS/CSA8200, TDS/CSA8000B, and TDS/CSA8000 sampling oscilloscopes.

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Updated 10 February 2011

## Characteristics

Characteristic	Description
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	20 ms (typical)

## Ordering Information

### 80A02

EOS/ESD Protection Module, Single Channel.

**Includes:** User Manual, 1 – SMA 50 Ω termination cap, 1 – 12 in. length 20 GHz SMA cable.

### Replaceable Items

Product	Description
015-1022-01	SMA 50 Ω termination
174-4878-xx	20 GHz SMA cable (12 in. length)

### Accessories

Accessory	Description
174-5230-xx	SlotSaver Adapter Extender Cable. Brings power and control to the 80A02 when operated externally from the DSA/TDS/CSA mainframe, saving slot space (compatible with 80A06*2 and 80A02)

\*2 Not compatible with DSA8300.



**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.tektronix.com](http://www.tektronix.com)



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26 May 2011

85W-16656-4

