

RoHS **Pb** **GREEN** **SP3002 Lead-Free/Green Series**
-- ESD protection for IEEE 1394 ports --
PRODUCT OVERVIEW

The SP3002 is well-suited for use in all 1394 data circuits, especially 1394b with its ultra low capacitance and ability to safely absorb repetitive ESD strikes at the that exceed the maximum level (Level 4) specified in the IEC 61000-4-2 international standard. Their very low loading capacitance makes them ideal for protecting the high speed signal lines (R+/-, T+/-) in IEEE 1394 ports.

FEATURES

- ESD, IEC61000-4-2, ±12V contact, ±15kV air
- Low capacitance of 0.85 pF (TYP) per I/O
- Low leakage current of 0.5µA (MAX) at 5V
- Small SC70 and SOT23 packages save board space
- Automotive rating: -40°C to +85°C


1394 AUTOMOTIVE APPLICATIONS

- Real time cameras
- DVD players
- Displays
- Infotainment systems
- Navigation systems
- Multimedia bus
- Driver assist systems
- Diagnostics

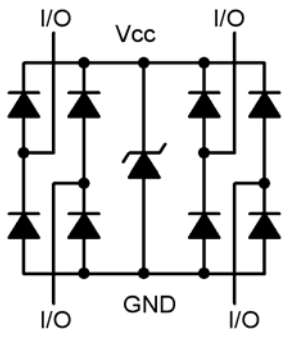
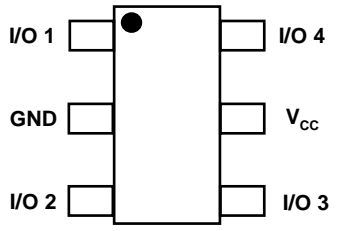
ELECTRICAL CHARACTERISTICS

Rated Voltage	6 V _{DC} , MAX
Capacitance¹	0.85 pF
Response Time²	< 1 ns
Leakage Current³	< 0.5 µA, MAX

¹ Measured at 1MHz, 1.65VDC
² 12kV contact discharge, per IEC61000-4-2
³ Measured at 5 V_{DC}

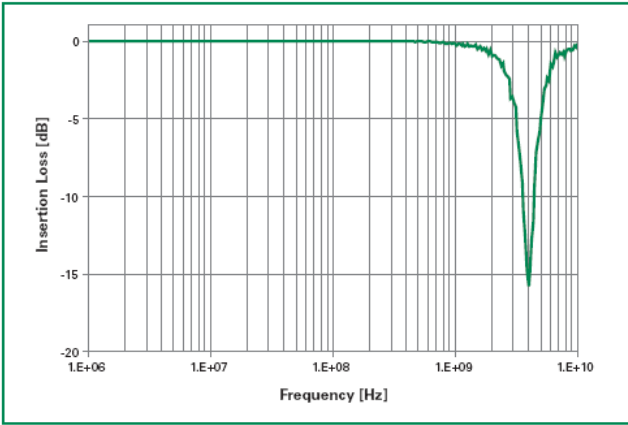
ORDERING INFORMATION

<u>Catalog Number</u>	<u>Package</u>	<u>Mark Code</u>	<u>per Reel</u>
SP3002-04HTG	SOT23-6	E*4	3,000
SP3002-04JTG	SC70-6	E*4	3,000

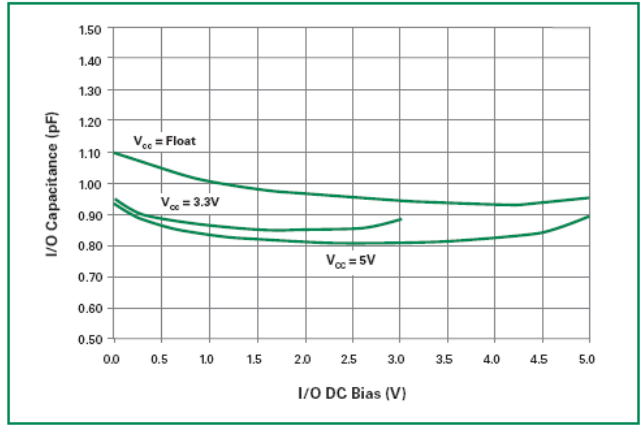
ELECTRICAL DIAGRAM

PACKAGE PINOUT

Littelfuse, Inc.

RoHS **Pb** **GREEN** **SP3002 Lead-Free/Green Series**

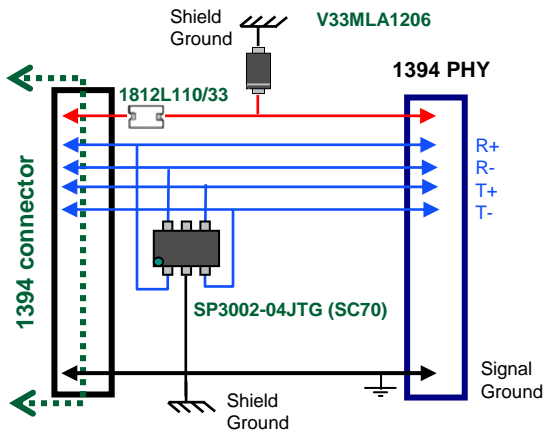
Insertion Loss (S21) I/O to GND



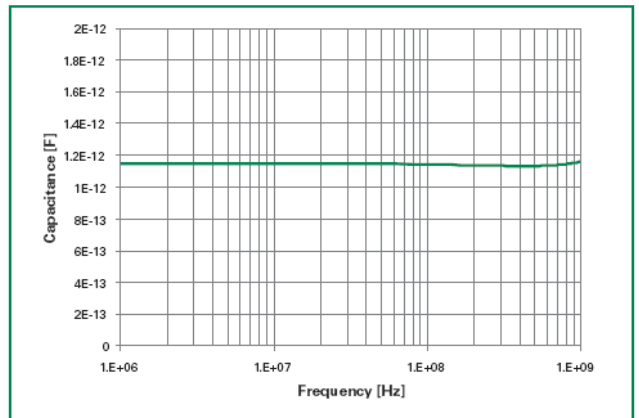
Capacitance vs. Bias Voltage



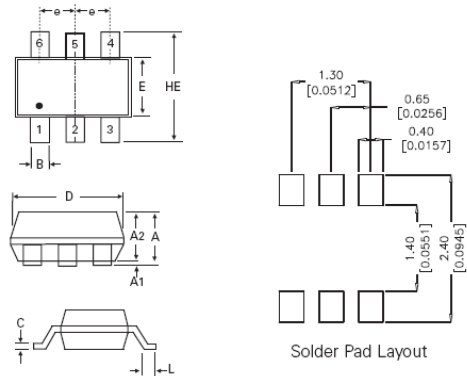
Application example



Capacitance vs. Frequency



Package Dimensions - SC70-6



Package	SC70-6			
Pins	6			
JEDEC	MO-203 Issue A			
	Millimeters		Inches	
	Min	Max	Min	Max
A	0.80	1.10	0.031	0.043
A1	0.00	0.10	0.000	0.004
A2	0.70	1.00	0.028	0.039
B	0.15	0.30	0.006	0.012
c	0.08	0.25	0.003	0.010
D	1.85	2.25	0.073	0.089
E	1.15	1.35	0.045	0.053
e	0.65 BSC		0.026 BSC	
HE	2.00	2.40	0.079	0.094
L	0.26	0.46	0.010	0.018

Littelfuse, Inc.

8755 West Higgins Road; Suite 500 • Chicago, IL 60631

Technical Assistance: (800) 999-9445

Visit our website at <http://www.littelfuse.com> • e-mail: electronics@littelfuse.com