

# Bidirectional ESD / Transient Suppressor

**COMCHIP**  
SMD DIODE SPECIALIST

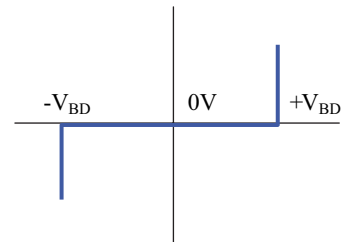
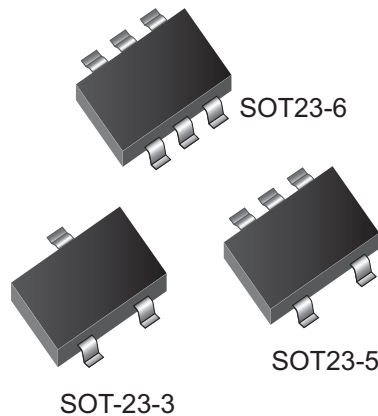
## CE Series -G (RoHS Device)

### Features

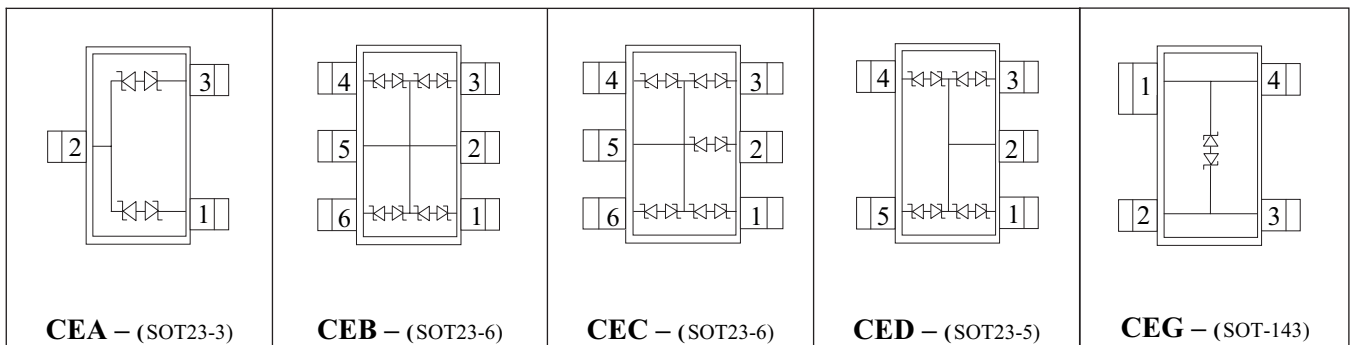
- (16kV) IEC 61000-4-2 rating
- Surface mount package
- High component density

### Applications

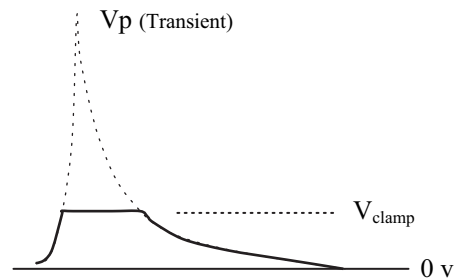
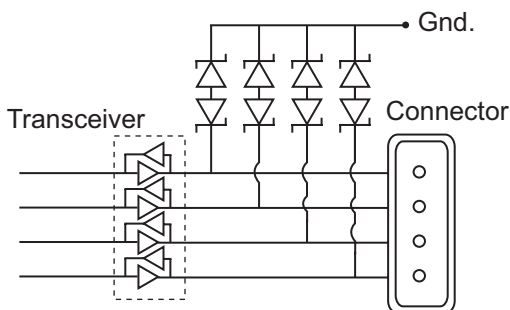
- ESD suppression
- Transient suppression
- Automotive CAN Bus



### Schematic



### Application Schematic



### Specifications (Ta = 25°C)

Symbol	Characteristic	Min.	Max.	Units
To	Operation Temperature Range	-55	+125	°C

# Bidirectional ESD / Transient Suppressor

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**Specifications:** ( Ta = 25°C )

## 36V Characteristic PRELIMINARY

Symbol	Characteristic	Min	Typ	Max	Units	Test Condition
V <sub>BD</sub>	Diode breakdown voltage	38	40		V	I <sub>F</sub> = 1 ma
I <sub>L</sub>	Leakage current		0.1	2.0	uA	36v
C <sub>T</sub>	Capacitance		5		pF	@ 1Mhz
V <sub>ESD</sub>	Channel clamp voltage		-	+ 40	V	8kV event
V <sub>PV</sub>	Peak ESD voltage capability			16	kV	IEC 61000-4-2
I <sub>pp</sub> *	Peak Pulse Current			15	A	8 / 20 us

## 24V Characteristic (CAN bus)

Symbol	Characteristic	Min	Typ	Max	Units	Test Condition
V <sub>BD</sub>	Diode breakdown voltage	25	28		V	I <sub>F</sub> = 1 ma
I <sub>L</sub>	Leakage current		0.1	2.0	uA	24v
C <sub>T</sub>	Capacitance		10		pF	@ 1Mhz
V <sub>ESD</sub>	Channel clamp voltage		-	+ 25	V	8kV event
V <sub>PV</sub>	Peak ESD voltage capability			16	kV	IEC 61000-4-2
I <sub>pp</sub> *	Peak Pulse Current			15	A	8 / 20 us

## 12V Characteristic PRELIMINARY

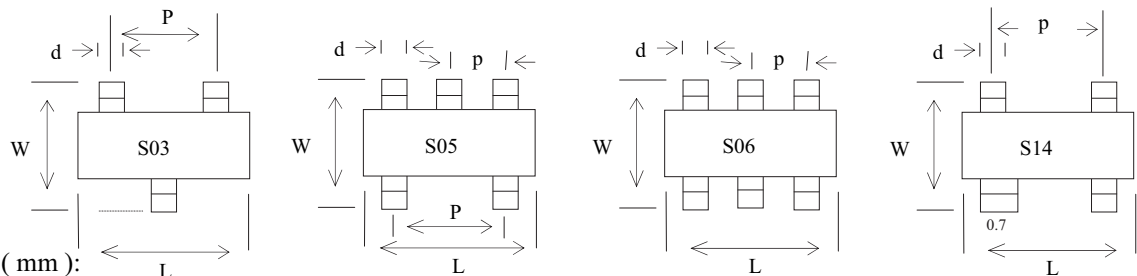
Symbol	Characteristic	Min	Typ	Max	Units	Test Condition
V <sub>BD</sub>	Diode breakdown voltage	14	17		V	I <sub>F</sub> = 1 ma
I <sub>L</sub>	Leakage current		0.1	2.0	uA	12v
C <sub>T</sub>	Capacitance		12		pF	@ 1Mhz
V <sub>ESD</sub>	Channel clamp voltage		-	+ 17	V	8kV event
V <sub>PV</sub>	Peak ESD voltage capability			16	kV	IEC 61000-4-2
I <sub>pp</sub> *	Peak Pulse Current			15	A	8 / 20 us

## 5V0 Characteristic

Symbol	Characteristic	Min	Typ	Max	Units	Test Condition
V <sub>BD</sub>	Diode breakdown voltage	5.1	7.0		V	I <sub>F</sub> = 1 ma
I <sub>L</sub>	Leakage current		+0.1	+ 2.0	uA	5v
C <sub>T</sub>	Capacitance		15	20	pF	@ 1Mhz
V <sub>ESD</sub>	Channel clamp voltage		-	+ 7.0	V	8kV event
V <sub>PV</sub>	Peak ESD voltage capability			16	kV	IEC 61000-4-2
I <sub>pp</sub> *	Peak Pulse Current			5.1	A	8 / 20 us

\* one diode conducting

## Package Information:



Code	Power	Pins	L ± 0.2	W ± 0.2	p ± 0.1	P ± 0.1	Pkg. Height	d ± 0.1
S03	225 mw	3	2.90	2.30	-	1.90	1.0	0.43
S05	225 mw	5	2.90	2.80	0.95	1.90	1.0	0.43
S06	225 mw	6	2.90	2.80	0.95	-	1.0	0.43
S14	225 mw	4	2.90	2.80	-	1.90	1.0	0.43

## Ordering Information:

**CEA**  
Type

CEA  
CEB  
CEC  
CED  
CEG

**S03**

Package Code  
From table above

**5V0**

Voltage  
5V0 / 12V  
12V / 24V

**-G**

RoHS Compliant