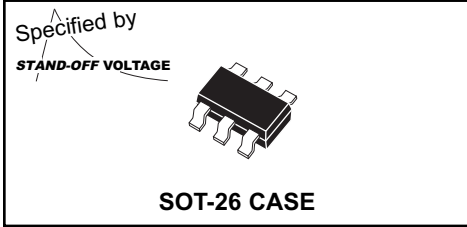


CSMS05  
 CSMS12  
 CSMS15  
 CSMS24

**SURFACE MOUNT  
 QUAD SILICON TVS/ZENER ARRAY  
 5 THRU 24 VOLTS**



# Central™

## Semiconductor Corp.

### DESCRIPTION:

The CENTRAL SEMICONDUCTOR CSMS05 Series is a 4 Line TVS/Zener Array packaged in the SOT-26 surface mount case. These devices are designed to protect sensitive equipment against ESD and prevent latch-up events in CMOS circuitry operating at 5V, 12V, 15V, and 24V.

### FEATURES

- Very low Clamping Voltage
- Low Leakage Current
- 350W Power Dissipation
- SMD SOT-26 Package
- IEC61000-4-2 ESD 20kV air, 15kV Contact Compliance

### APPLICATIONS:

- PDA's
- Cell Phones
- Memory Card Ports
- Instrumentation

### MARKING CODES

**CSMS05: CS05**  
**CSMS12: CS12**  
**CSMS15: CS15**  
**CSMS24: CS24**

### MAXIMUM RATINGS: (T<sub>A</sub>=25°C unless otherwise noted)

Peak Pulse Power  
 ESD Voltage (HBM)  
 Operating Temperature Range  
 Storage Temperature Range

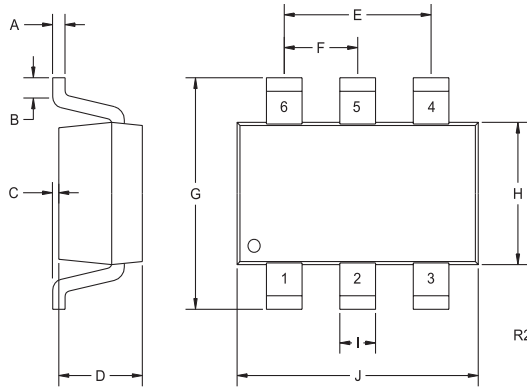
SYMBOL		UNITS
P <sub>pp</sub>	350	W
V <sub>ESD</sub>	>25	kV
T <sub>J</sub>	-50 to +125	°C
T <sub>stg</sub>	-50 to +150	°C

### ELECTRICAL CHARACTERISTICS: (T<sub>A</sub>=25°C unless otherwise noted)

TYPE NO.	Reverse Stand-Off Voltage	Reverse Breakdown Voltage		Reverse Leakage Current		Clamping Voltage 8 x 20µs		Clamping Voltage 8 x 20µs		Off State Junction Capacitance (V <sub>R</sub> =0V, f=1MHz)
	V <sub>WRM</sub> MAX (V)	V <sub>BR</sub> MIN (V)	I <sub>BR</sub> (mA)	I <sub>R</sub> MAX (µA)	V <sub>R</sub> (V)	V <sub>cl</sub> MAX (V)	I <sub>pp</sub> (A)	V <sub>cl</sub> MAX (V)	I <sub>pp</sub> (A)	C <sub>J</sub> MAX (pF)
CSMS05	5	6.0	1.0	5.0	5	9.5	5.0	13	24	200
CSMS12	12	13.3	1.0	5.0	12	17	5.0	21	24	90
CSMS15	15	16.7	1.0	5.0	15	22	5.0	27	24	70
CSMS24	24	26.7	1.0	5.0	24	35	5.0	40	24	50

**SURFACE MOUNT  
QUAD SILICON TVS/ZENER ARRAY  
5 THRU 24 VOLTS**

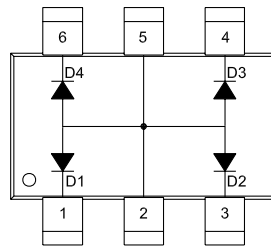
**SOT-26 - CASE - MECHANICAL OUTLINE**



SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.004	0.007	0.11	0.19
B	0.016	-	0.40	-
C	-	0.004	-	0.10
D	0.039	0.047	1.00	1.20
E	0.074	0.075	1.88	1.92
F	0.037	0.038	0.93	0.97
G	0.102	0.118	2.60	3.00
H	0.059	0.067	1.50	1.70
I	0.016		0.41	
J	0.110	0.118	2.80	3.00

SOT-26 (REV: R2)

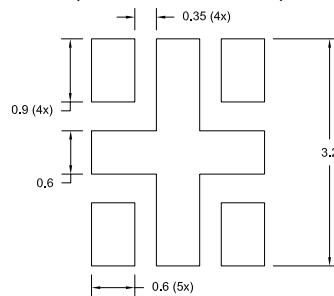
**Pin Configuration**



Lead code:

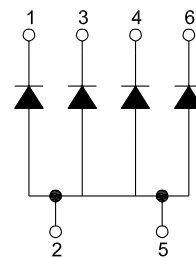
- 1) Cathode D1
- 2) Anode D1, D2, D3, D4
- 3) Cathode D2
- 4) Cathode D3
- 5) Anode D1, D2, D3, D4
- 6) Cathode D4

**Suggested mounting pad layout  
for maximum power dissipation  
(Dimensions in mm)**



For Standard mounting, refer to SOT-26 Package Details.

**Circuit Diagram**



R0 (13-September 2005)