

# CM1282-01D1

## 1-Channel Ultra-Low Capacitance ESD Protection Device

### Product Description

The CM1282-01D1 is an ultra-low capacitance, 1-channel ESD protection device. The CM1282-01D1 is fully compliant with IEC 61000-4-2 and is also RoHS-compliant.

### Features

- 1 Channel ESD Protection
- Provides In-System ESD Protection to IEC61000-4-2 Level 4
  - $\pm 8$  kV Contact Discharge
- Back-to-Back Diode (I/O-to-I/O Configuration)
- Compact DSN2 (1 mm x 0.6 mm x 0.5 mm) Package Saves Board Space and Facilitates Layout in Space-Critical Applications
- These Devices are Pb-Free and are RoHS Compliant

### Applications

ESD Protection for Static-Sensitive Electronic Equipment such as:

- Wireless Handsets
- Handheld PCs/PDAs
- MP3 Players
- Digital Camcorders
- Notebooks
- Desktop PCs



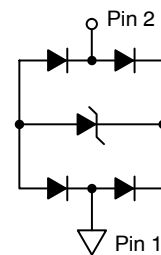
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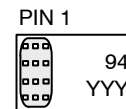


DSN2  
D1 SUFFIX  
CASE 152AE

### ELECTRICAL SCHEMATIC



### MARKING DIAGRAM



94 = Specific Device Code  
YYY = Year Code

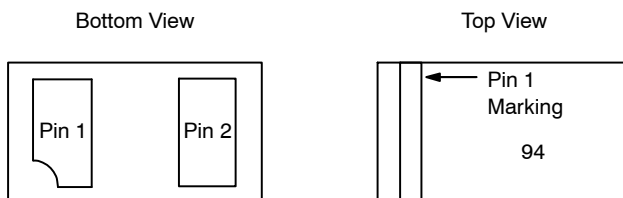
### ORDERING INFORMATION

Device	Package	Shipping†
CM1282-01D1	DSN2 (Pb-Free)	5000/Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, BRD8011/D.

# CM1282-01D1

## PACKAGE / PINOUT DIAGRAM



**Table 1. PIN DESCRIPTIONS**

1-Channel DSN2 Package			
Pin	Name	Type	Description
1	V <sub>N</sub>	GND	Ground
2	CH	I/O	ESD Channel

## SPECIFICATIONS

**Table 2. ABSOLUTE MAXIMUM RATINGS**

Parameter	Rating	Units
Storage Temperature Range	-65 to +150	°C
Package Power Dissipation	450	mW

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

**Table 3. STANDARD OPERATING CONDITIONS**

Parameter	Rating	Units
Operating Temperature	-40 to +85	°C

**Table 4. ELECTRICAL OPERATING CHARACTERISTICS** (Note 1)

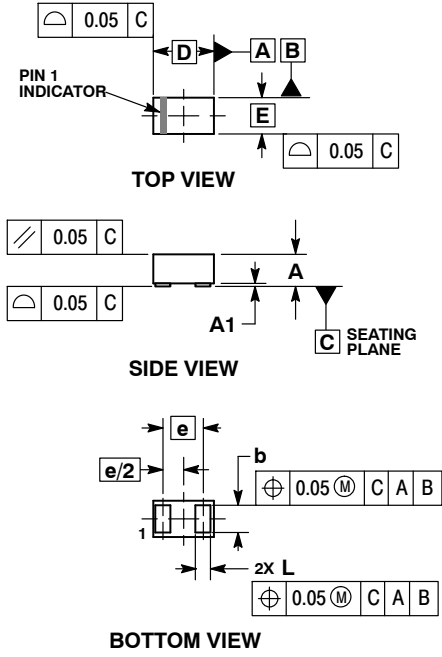
Symbol	Parameter	Conditions	Min	Typ	Max	Units
V <sub>BR</sub>	Reverse Breakdown Voltage	I <sub>IN</sub> = ±10 mA	±7.5	±9.0	±11.0	V
I <sub>LEAK</sub>	Channel Leakage Current	V <sub>IN</sub> = ±5 V		0.1	1.0	μA
C <sub>IN</sub>	Channel Input Capacitance	At 1 MHz, V <sub>IN</sub> = 0 V		0.5	0.6	pF
V <sub>ESD</sub>	ESD Protection (Peak Discharge Voltage at any Channel Input, in System): Contact Discharge per IEC 61000-4-2 Standard	(Note 2)	8			kV
V <sub>CL</sub>	Channel Clamp Voltage	I <sub>PP</sub> = ±1 A, t <sub>P</sub> = 8/20 μs		11		V
R <sub>DYN</sub>	Dynamic Resistance	I <sub>PP</sub> = ±1 A, t <sub>P</sub> = 8/20 μs		1.2		Ω

- All parameters specified at T<sub>A</sub> = 25°C unless otherwise noted.
- Standard IEC 61000-4-2 with C<sub>Discharge</sub> = 150 pF, R<sub>Discharge</sub> = 330 Ω

# CM1282-01D1

## PACKAGE DIMENSIONS

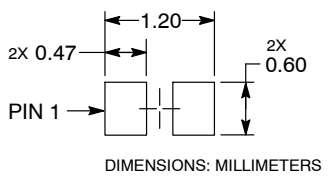
DSN2, 1.0x0.6, 0.65P, (0402)  
CASE 152AE-01  
ISSUE O



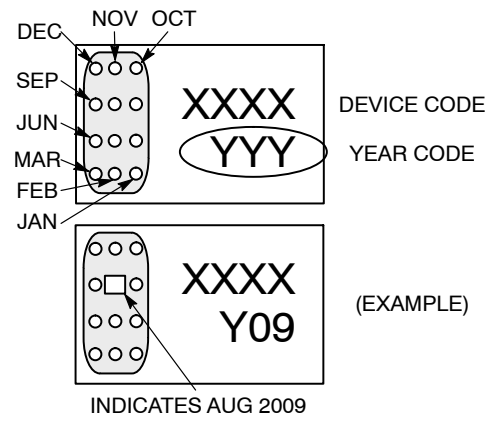
- NOTES:
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
  2. CONTROLLING DIMENSION: MILLIMETERS.

MILLIMETERS		
DIM	MIN	MAX
A	0.25	0.31
A1	---	0.05
b	0.45	0.55
D	1.00 BSC	
E	0.60 BSC	
e	0.65 BSC	
L	0.20	0.30

### RECOMMENDED SOLDER FOOTPRINT\*



### CATHODE BAND MONTH CODING



See Application Note AND8398/D for more mounting details

\*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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