

CM1242-33CP

1-Channel ESD Protection Device in 0201 CSP

Description

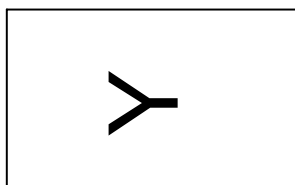
The CM1242-33CP is a 2-bump ESD protection device in 0201 CSP form factor. It is fully compliant with IEC 61000-4-2. The CM1242-33CP is also RoHS II compliant and has a pure tin finish.

Table 1. PIN DESCRIPTIONS

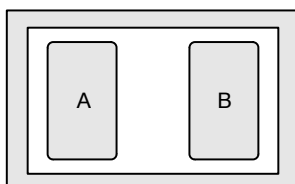
| Pin | Description |
|-----|-------------------|
| A | ESD Channel Pin 1 |
| B | ESD Channel Pin 2 |

PACKAGE / PINOUT DIAGRAMS

Top View
(Bumps Down)



Bottom View
(Bumps Up)



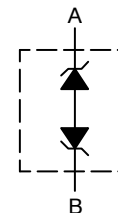
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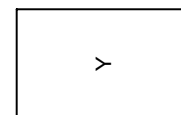


WLCSP2
CP SUFFIX
CASE 567AV

BLOCK DIAGRAM



MARKING DIAGRAM



Y = Specific Device Code

ORDERING INFORMATION

| Device | Package | Shipping |
|-------------|------------------|--------------------|
| CM1242-33CP | CSP (Pb-Free) | 10,000/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.

CM1242-33CP

SPECIFICATIONS

Table 2. STANDARD OPERATING CONDITIONS

| Parameter | Rating | Units |
|-----------------------------|-------------|-------|
| Storage Temperature Range | -55 to +150 | °C |
| Operating Temperature Range | -40 to +85 | °C |
| Maximum Input Voltage | ±5.5 | V |

Table 3. ELECTRICAL OPERATING CHARACTERISTICS (Note 1)

| Symbol | Parameter | Conditions | Min | Typ | Max | Units |
|-------------------|--|--|-------------|--------------|-------------|-------|
| V _B | Breakdown Voltage | I _F = +10 mA I _F = -10 mA | 6.0 -9.0 | 7.6 -7.6 | 9.0 -6.0 | V |
| I _{LEAK} | Channel Leakage Current | V _{IN} = ±3.3 V | | ±0.1 | ±0.5 | μA |
| C _{IN} | Channel Input Capacitance | At 1 MHz, V _{IN} = 0 V | 45 | 55 | 66 | pF |
| V _{ESD} | ESD Protection Peak Discharge Voltage at any channel input a) Contact Discharge per IEC 61000-4-2 standard b) Air Discharge per IEC 61000-4-2 standard | (Note 2) | ±30 ±30 | | | kV |
| V _{CL} | Channel Clamp Voltage Positive Transients Negative Transients | I _{PP} = 1 A, t _p = 8/20 μs | | +8.6 -8.6 | | V |
| R _{DYN} | Dynamic Resistance Positive Transients Negative Transients | I _{PP} = 1 A, t _p = 8/20 μs | | 0.4 0.4 | | Ω |

1. T_A = 25°C unless otherwise specified.
2. Standard IEC 61000-4-2 with C_{Discharge} = 150 pF, R_{Discharge} = 330 Ω.

CM1242-33CP

MECHANICAL SPECIFICATIONS

CM1242-33CP Mechanical Specifications

The CM1242-33CP is supplied in a 2-bump Chip Scale Package (CSP). Dimensions are presented below.

Table 4. CSP TAPE AND REEL SPECIFICATIONS

| Part Number | Chip Size (mm) | Pocket Size (mm) $B_0 \times A_0 \times K_0$ | Tape Width W | Reel Diameter | Qty per Reel | P_0 | P_1 |
|-------------|---------------------|---|-----------------|---------------|--------------|-------|-------|
| CM1242-33CP | 0.60 X 0.30 X 0.275 | 0.67 X 0.37 X 0.35 | 8 mm | 178 mm (7") | 10,000 | 4 mm | 2 mm |

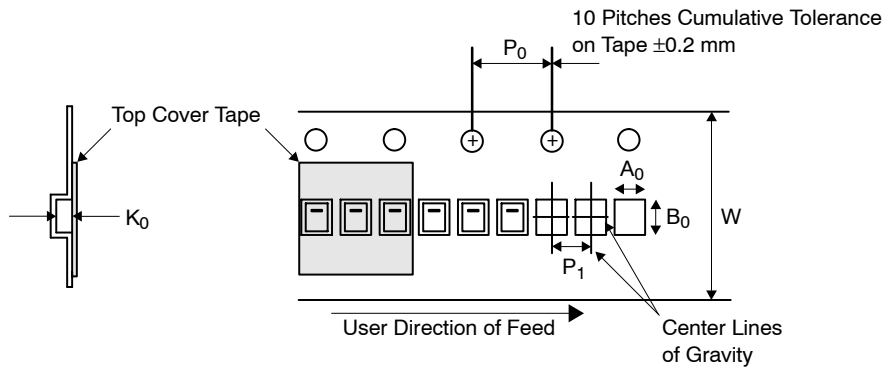
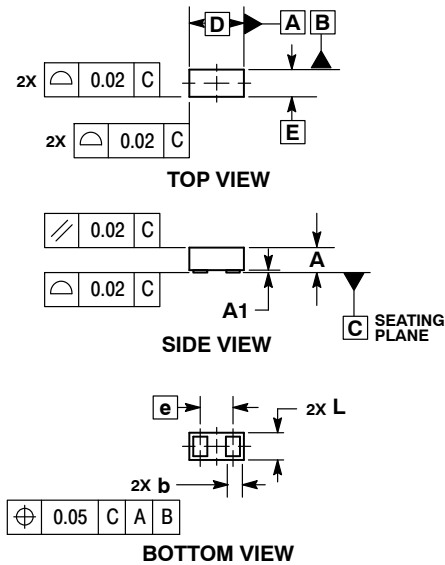


Figure 1. Tape and Reel Mechanical Data

CM1242-33CP

PACKAGE DIMENSIONS

WLCSP2, 0.6x0.3
CASE 567AV
ISSUE O

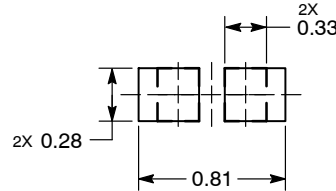


NOTES:

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

| MILLIMETERS | | |
|-------------|----------|------|
| DIM | MIN | MAX |
| A | 0.25 | 0.30 |
| A1 | 0.00 | 0.05 |
| b | 0.14 | 0.17 |
| D | 0.60 BSC | |
| E | 0.30 BSC | |
| e | 0.36 BSC | |
| L | 0.19 | 0.24 |

**RECOMMENDED
SOLDER FOOTPRINT***



DIMENSIONS: MILLIMETERS

*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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