

CM1242-33CP

1-Channel ESD Protection Device in 0201 CSP

Description

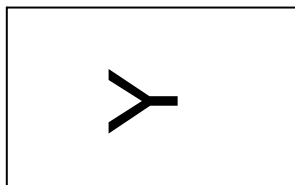
The CM1242-33CP is a 2-bump ESD protection device in 0201 CSP form factor. It is fully compliant with IEC 61000-4-2. The CM1242-33CP is also RoHS II compliant and has a pure tin finish.

Table 1. PIN DESCRIPTIONS

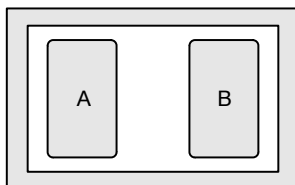
Pin	Description
A	ESD Channel Pin 1
B	ESD Channel Pin 2

PACKAGE / PINOUT DIAGRAMS

Top View
(Bumps Down)



Bottom View
(Bumps Up)



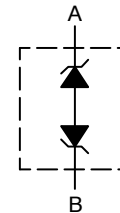
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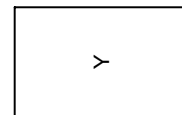


WLCSP2
CP SUFFIX
CASE 567AV

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

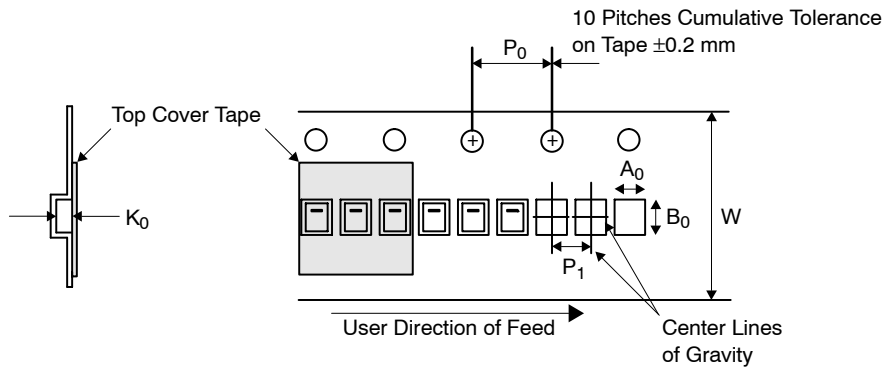
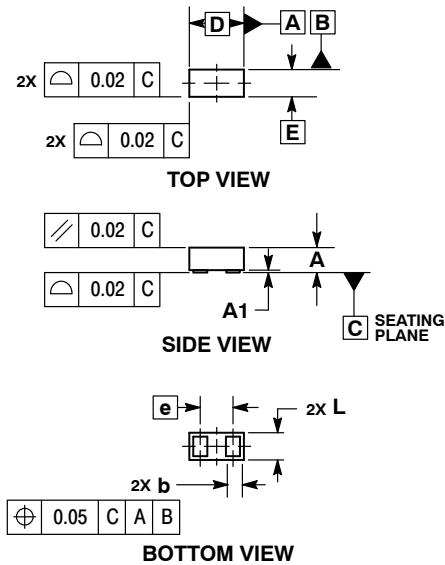


Figure 1. Tape and Reel Mechanical Data

CM1242-33CP

PACKAGE DIMENSIONS

WLCSP2, 0.6x0.3
CASE 567AV
ISSUE O

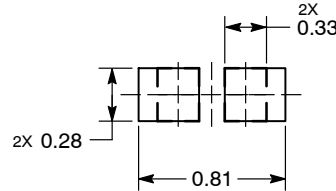


NOTES:

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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