



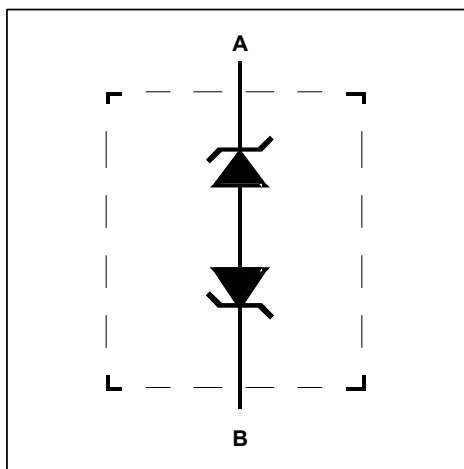
1-Channel ESD Protection Device in 0201 CSP

CM1242-33CP

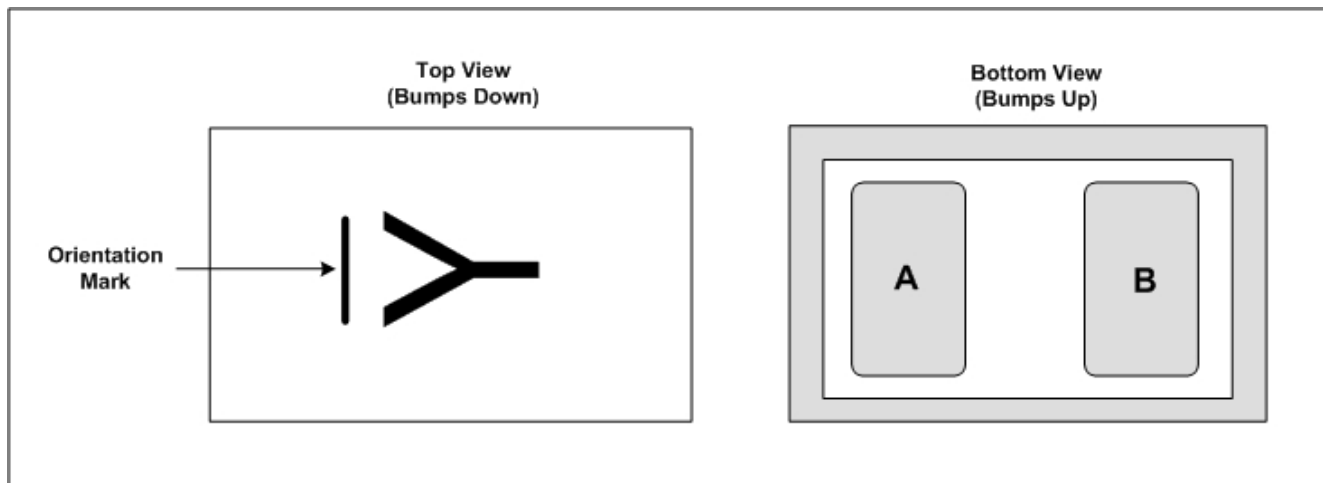
Functional Description

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.

Electrical Schematic



Pin Configurations



CM1242-33CP

Pin Descriptions

PIN	DESCRIPTION
A	ESD Channel Pin 1
B	ESD Channel Pin 2

Ordering Information

Bumps	Package	Ordering Part Number ¹	Part Marking
2	CSP	CM1242-33CP	Y

Note 1: Parts are shipped in Tape and Reel form.

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

CM1242-33CP

Electrical Operating Characteristics (see Note 1)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
V _B	Breakdown Voltage	I _F = +10mA	6.0	7.6	9.0	V
		I _F = -10mA	-9.0	-7.6	-6.0	V
I _{LEAK}	Channel Leakage Current	V _{IN} = ±3V		±0.1	±0.50	μA
C _{IN}	Channel Input Capacitance	At 1 MHz, V _{IN} =0V	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			kV
			±30			kV
V _{CL}	Channel Clamp Voltage Positive Transients Negative Transients	I _{PP} = 1A, t _P = 8/20μs		+8.6		V
				-8.6		V
R _{DYN}	Dynamic Resistance Positive Transients Negative Transients	I _{PP} = 1A, t _P = 8/20μs		0.4		Ω
				0.4		Ω

Note 1: T_A=25°C unless otherwise specified.

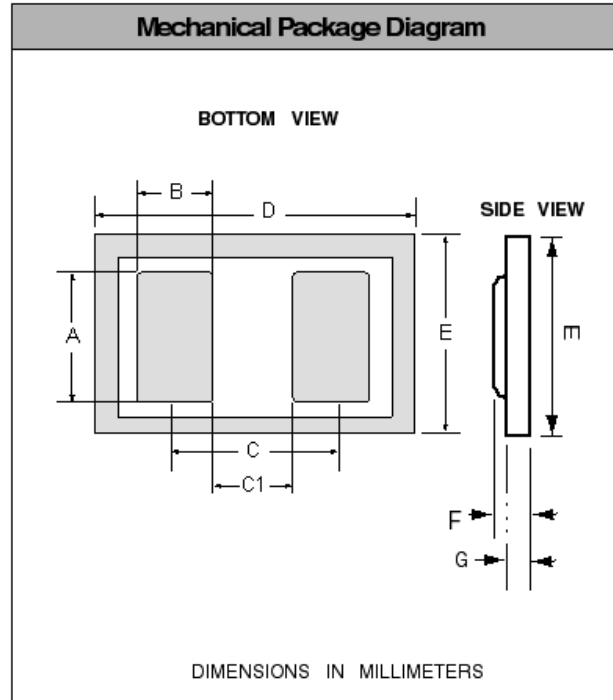
Note 2: Standard IEC 61000-4-2 with C_{Discharge} = 150pF, R_{Discharge} = 330Ω.

CM1242-33CP

CM1242-33CP Mechanical Specifications

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

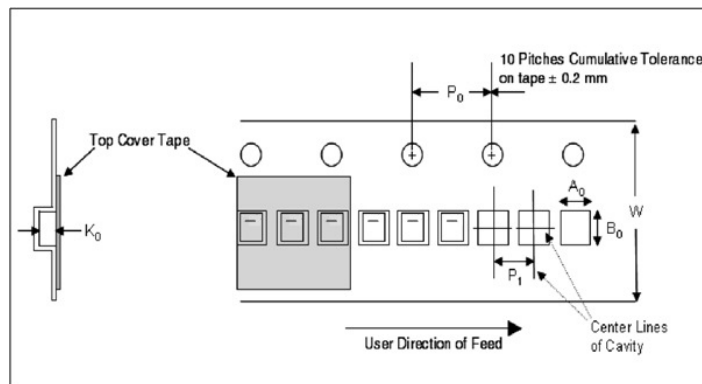
Package Specifications						
Package	Custom CSP					
Bumps	2					
Dim	Millimeters			Inches		
	Min	Nom	Max	Min	Nom	Max
A	0.195	0.215	0.235	0.00768	0.00846	0.00925
B	0.140	0.155	0.170	0.0055	0.0061	0.0067
C	0.360 REF			0.01417 REF		
C1	0.190	0.205	0.220	0.00748	0.00807	0.00866
D	0.570	0.600	0.630	0.02244	0.02362	0.02480
E	0.270	0.300	0.330	0.01063	0.01181	0.01299
F	0.250	0.275	0.300	0.00984	0.01083	0.01181
G	0.240	0.265	0.290	0.00945	0.01043	0.01142
Controlling dimension: millimeters						



CM1242-33CP Chip Scale Package


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	0.600 X 0.300 X 0.275	0.67 x 0.37 x 0.35	8mm	178mm (7")	15,000	4mm	2mm



Tape and Reel Mechanical Data

CM1242-33CP

ON Semiconductor and  are registered trademarks of Semiconductor Components Industries, LLC (SCILLC). SCILLC reserves the right to make changes without further notice to any products herein. SCILLC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does SCILLC assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. "Typical" parameters which may be provided in SCILLC data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. SCILLC does not convey any license under its patent rights nor the rights of others. SCILLC products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the SCILLC product could create a situation where personal injury or death may occur. Should Buyer purchase or use SCILLC products for any such unintended or unauthorized application, Buyer shall indemnify and hold SCILLC and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that SCILLC was negligent regarding the design or manufacture of the part. SCILLC is an Equal Opportunity/Affirmative Action Employer. This literature is subject to all applicable copyright laws and is not for resale in any manner.

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:

Literature Distribution Center for ON Semiconductor
P.O. Box 5163, Denver, Colorado 80217 USA
Phone: 303-675-2175 or 800-344-3860 Toll Free USA/Canada
Fax: 303-675-2176 or 800-344-3867 Toll Free USA/Canada
Email: orderlit@onsemi.com

N. American Technical Support: 800-282-9855
Toll Free USA/Canada
Europe, Middle East and Africa Technical Support:
Phone: 421 33 790 2910
Japan Customer Focus Center
Phone: 81-3-5773-3850

ON Semiconductor website: www.onsemi.com
Order Literature: <http://www.onsemi.com/orderlit>
For additional information, please contact your local Sales Representative