

8-channel ESD/TVS Protection Diode *in Chip Scale Packaging (CSP)*

Features

- 8 channels ESD protection at 15KV per IEC61000
- 10-bump Chip Scale Package (CSP) 1.9mm x 1.3mm
- Chip layout enables easy PCB layout
- RoHS Compliant in Lead-Free Versions

Applications

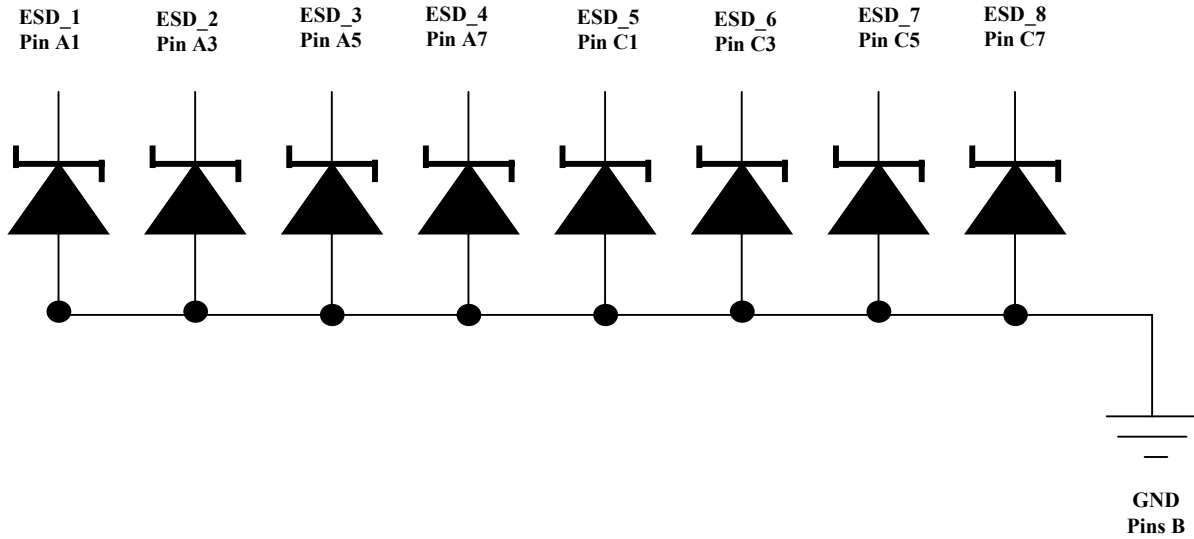
- Cellular Handsets
- PDA
- MP3 Players
- PC & Notebooks
- Printers
- Digital Cameras

Product Description

The ESD3100 Diode Array consists of 8 robust ESD protection devices. Housed in miniature CSP format this product is ideal suited for portable devices with SIM card slots.

ELECTRICAL CHARACTERISTICS			
Parameter	Min.	Typical	Max.
Stand-off Voltage @ I = 10µA	-	6V	-
Signal Voltage, Positive Clamp @ I _{LOAD} = 10mA	5.6V	6.8V	9V
Signal Voltage, Negative Clamp @ I _{LOAD} = -10mA	-1.5V	-0.8V	-0.4V
In-system ESD Withstand Voltage, Human Body Model, MIL-STD-883, Method 3015	± 15 KV	-	-
In-system ESD Withstand Voltage, Contact Discharge per IEC, 61000-4-2	± 10 KV	-	-
Clamping Voltage during ESD Discharge MIL-STD-883 (Method 3015), 8kV Positive Transients	-	-	+12V
Clamping Voltage during ESD Discharge MIL-STD-883 (Method 3015), 8kV Negative Transients	-	-	-7V
Cut-off frequency ZSOURCE = 50W, ZLOAD = 50W, R = 100W, C = 20pF	-	77MHz	-
Cut-off frequency ZSOURCE = 50W, ZLOAD = 50W, R = 47W, C = 20pF	-	85MHz	-

Schematic & CSP pin-out



DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

PARAMETER	VALUE	UNITS
Operating Temperature	-40°C to 85°C	°C
Storage Temperature	-55°C to 150°C	°C
Soldering Temperature for 10 seconds	265	°C

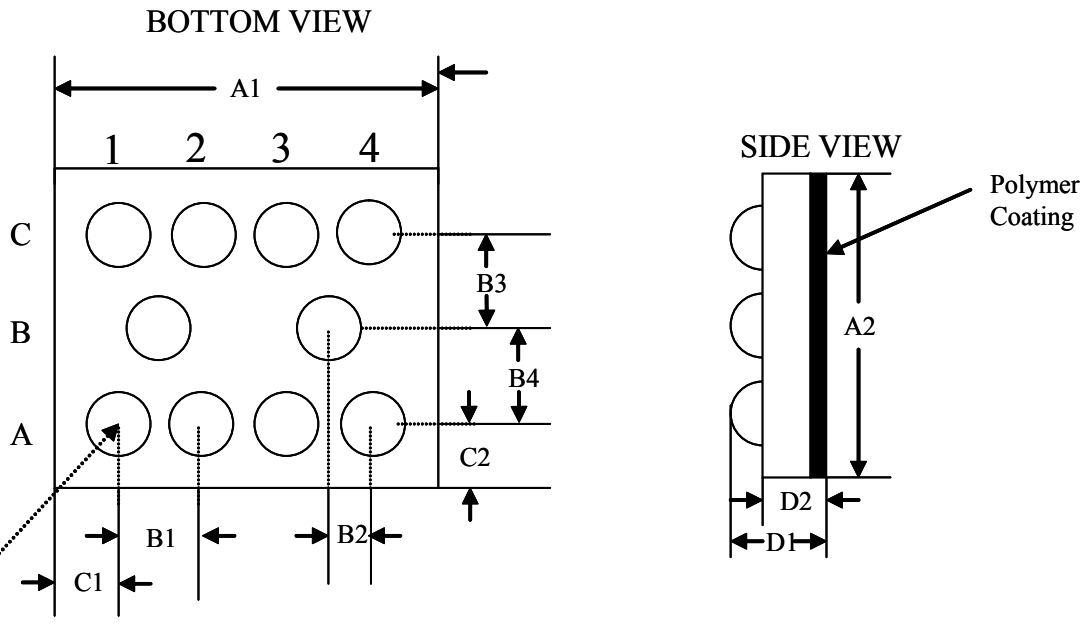
Ordering Part Number

PART NUMBER	DESCRIPTION	DEVICE MARKING CODE
ESD3100-08CR	Lead-free RoHS Compliant	1402

OBJECTIVE DATA SHEET

OnChip

ESD3100



0.30 DIA.
 63/37 Sn/Pb Eutectic or
 96.8/2.6/0.6 Sn/Ag/Cu (Lead-Free) SOLDER BUMPS

PACKAGE DIMENSIONS						
PACKAGE	CUSTOM CSP					
BUMPS	10					
DIM	MILLIMETERS			INCHES		
	Min	Nom	Max	Min	Nom	Max
A1	1.915	1.960	2.005	0.0754	0.0772	0.0789
A2	1.285	1.330	1.375	0.0506	0.0524	0.0541
B1	0.495	0.500	0.505	0.0195	0.0197	0.0199
B2	0.245	0.250	0.255	0.0096	0.0098	0.0100
B3	0.430	0.435	0.440	0.0169	0.0171	0.0173
B4	0.430	0.435	0.440	0.0169	0.0171	0.0173
C1	0.180	0.230	0.280	0.0071	0.0091	0.0110
C2	0.180	0.230	0.280	0.0071	0.0910	0.0110
D1	0.575	0.644	0.714	0.0226	0.0254	0.0281
D2	0.368	0.419	0.470	0.0145	0.0165	0.0185
# per tape and reel	3500 pieces					
Controlling dimension: millimeters						