

## Features

- Shields ESD sensitive items from charge and electrostatic discharges (with lid in place).
- Provides ESD and physical protection for ESD sensitive circuit boards.
- Impregnated corrugated material; greater durability than coated or printed material.
- Constructed with double sides, double (boxes under 6" deep) or triple (boxes over 6" deep) ends, and single (boxes under 6" deep) or double (boxes over 6" deep) thickness bottom for greater durability.
- Static dissipative surface of  $10E6 - 10E8$  ohms - minimizing the potential of rapid discharge or sparking.
- Buried shielding layer minimizing the potential of sloughing and rub-off contamination.
- Made from 100% recycled material, and is 100% recyclable
- No tooling costs.
- Easy assembly without the need for tape, glue, or staples.

## SPECIFICATIONS

### Properties

#### Electrostatic Decay

#### Surface Resistance

#### Surface Resistance, Low R.H. Cut-off

#### High-Voltage Discharge Resistance

#### Static Shielding

#### Charged Device Model (CDM) Safety

#### Corrosivity

#### Antistat Transfer

#### Water & Isopropyl Alcohol Extraction Tests for Antistat Permanence

#### Sloughing Test

#### Recyclability

#### Biodegradability

#### Volume Conductivity

#### Shelf Life

### Typical Values

0.01 seconds at 72°F and 11.8% R.H.

$10E6 - 10E8$  ohms/sq. after 11 days at 68°F and 12% R.H. for surface.  $10E3 - 10E4$  ohms/sq. for buried shielding layer 4% R.H.

Failure rate 0/5 (no oxide damage in five consecutive tests)

99.9% attenuation at 10kV; 99.6% attenuation at 30kV

RTG  $>10E7$  ohms at 86% R.H. or less

Contains 1-3 ppm reducible sulfur

No transfer

Surface resistance  $10E8 - 10E9$  ohms/square at 74°F and 36% R.H.

Negligible surface damage at 10 cycles and  $<5\%$  of surface damage at 200 cycles in Taber Abrasion Test.

No conductive particles abraded from surface

Complete recyclability of package

Biodegradation in or on moist soil

Conductivity from wall to wall as well as across surface to assure permanence of the antistatic property

Indefinite

### Test Procedures/Method

FED-STD-101, Method 4046

ASTM D257

Rockwell International Test Report of December 20, 1991

Rockwell International Test Report of December 20, 1991

EIA 541, appendix E, capacitive probe test

Rockwell International Test Report of December 20, 1991

FED-STD-101, Method 3005 for reducible sulfur

Rockwell International Test Report of January 8, 1992

Rockwell International Test Report of January 8, 1992

ASTM D4060 at 70 rpm with CS-17 abrasive-coated wheels and 1000 grams load

Rockwell International Test Report of January 8, 1992

Rockwell International Test Report of January 8, 1992

Rockwell International Test Report of January 8, 1992

See reverse side  
for available sizes.



Made in America

## CORRUGATED IN-PLANT HANDLERS

**PROTEKTIVE PAK**  
**BURIED SHIELDING LAYER**

PROTEKTIVE PAK  
13520 MONTE VISTA AVENUE, CHINO, CA 91710  
PHONE (909) 627-2578, FAX (909) 363-7331  
ProtektivePak.com

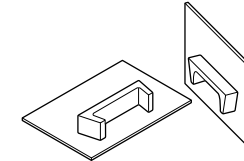
**DRAWING NUMBER**  
37150

**DATE:**  
April  
2009

Item No.	Cell Size W x L x Th	# of Cells	Item No.	Cell Size W x L x Th	# of Cells	Item No.	Cell Size W x L x Th	# of Cells	Item No.	Cell Size W x L x Th	# of Cells
37233**/****	2-1/2 x 2-1/4 x 3/4	60	37240	6-3/4 x 14-5/8 x 2-3/8	5	37346	10 x 8-1/8 x 1	24	37186	12-5/8 x 6-1/2 x 2-1/4	15
37229**/****	2-1/2 x 2-1/4 x 1-3/4	30	37157***	7-1/4 x 2-1/8 x 3/4	60	37342	10 x 8-1/8 x 1-1/4	20	37189	12-5/8 x 10 x 1	20
37232**/****	2-1/2 x 4-3/4 x 3/4	30	37153***	7-1/4 x 2-1/8 x 1-3/4	30	37338	10 x 8-1/8 x 2-3/4	10	37185	12-5/8 x 10 x 2-1/4	10
37228**/****	2-1/2 x 4-3/4 x 1-3/4	15	37156***	7-1/4 x 4-3/4 x 3/4	30	37267	10 x 10 x 1	20	37180*	12-5/8 x 10-3/4 x 3-5/8	6
37231**/****	2-1/2 x 7-1/4 x 3/4	20	37152***	7-1/4 x 4-3/4 x 1-3/4	15	37263	10 x 10 x 2-1/4	10	37181*	12-5/8 x 10-3/4 x 1-5/8	12
37227**/****	2-1/2 x 7-1/4 x 1-3/4	10	37155***	7-1/4 x 7-1/4 x 3/4	20	37259*	10 x 10-3/4 x 1-5/8	12	37188	12-5/8 x 20-1/8 x 1	10
37230**/****	2-1/2 x 14-3/4 x 3/4	10	37151***	7-1/4 x 7-1/4 x 1-3/4	10	37258*	10 x 10-3/4 x 3-5/8	6	37184	12-5/8 x 20-1/8 x 2-1/4	5
37226**/****	2-1/2 x 14-3/4 x 1-3/4	5	37154***	7-1/4 x 14-3/4 x 3/4	10	37332*	10 x 12-3/4 x 1-1/4	12	37309	12-3/4 x 7-3/4 x 1	20
37225**/****	3-1/2 x 2-1/4 x 3/4	60	37150***	7-1/4 x 14-3/4 x 1-3/4	5	37331*	10 x 12-3/4 x 1-5/8	10	37307	12-3/4 x 7-3/4 x 2-1/4	10
37221**/****	3-1/2 x 2-1/4 x 1-3/4	30	37398	8 x 4 x 1-1/4	40	37330*	10 x 12-3/4 x 2-7/8	6	37308	12-3/4 x 16 x 1	10
37224**/****	3-1/2 x 4-3/4 x 3/4	30	37394	8 x 4 x 2-3/4	20	37329*	10 x 12-3/4 x 3-5/8	5	37306	12-3/4 x 16 x 2-1/4	5
37220**/****	3-1/2 x 4-3/4 x 1-3/4	15	37305	8 x 4-3/4 x 1	40	37345	10 x 16-5/8 x 1	12	37380	14 x 4 x 1-1/4	40
37223**/****	3-1/2 x 7-1/4 x 3/4	20	37301	8 x 4-3/4 x 2-1/4	20	37341	10 x 16-5/8 x 1-1/4	10	37376	14 x 4 x 2-3/4	20
37219**/****	3-1/2 x 7-1/4 x 1-3/4	10	37297*	8 x 5-3/16 x 1-5/8	24	37337	10 x 16-5/8 x 2-3/4	5	37379	14 x 5-3/8 x 1-1/4	30
37222**/****	3-1/2 x 14-3/4 x 3/4	10	37296*	8 x 5-3/16 x 3-5/8	12	37266	10 x 20-1/8 x 1	10	37375	14 x 5-3/8 x 2-3/4	15
37218**/****	3-1/2 x 14-3/4 x 1-3/4	5	37397	8 x 5-3/8 x 1-1/4	30	37262	10 x 20-1/8 x 2-1/4	5	37372*	14 x 6-1/4 x 1-1/4	24
37165**/****	5-3/8 x 2-1/4 x 3/4	60	37393	8 x 5-3/8 x 2-3/4	15	37257	10-3/4 x 4-5/8 x 1	30	37371*	14 x 6-1/4 x 1-5/8	20
37161**/****	5-3/8 x 2-1/4 x 1-3/4	30	37390*	8 x 6-1/4 x 1-1/4	24	37254	10-3/4 x 4-5/8 x 2-3/8	15	37370*	14 x 6-1/4 x 2-7/8	12
37164**/****	5-3/8 x 4-3/4 x 3/4	30	37389*	8 x 6-1/4 x 1-5/8	20	37256	10-3/4 x 7-1/8 x 1	20	37369*	14 x 6-1/4 x 3-5/8	10
37160**/****	5-3/8 x 4-3/4 x 1-3/4	15	37388*	8 x 6-1/4 x 2-7/8	12	37253	10-3/4 x 7-1/8 x 2-3/8	10	37382	14 x 8-1/8 x 1	24
37163**/****	5-3/8 x 7-1/4 x 3/4	20	37387*	8 x 6-1/4 x 3-5/8	10	37255	10-3/4 x 14-5/8 x 1	10	37378	14 x 8-1/8 x 1-1/4	20
37159**/****	5-3/8 x 7-1/4 x 1-3/4	10	37304	8 x 6-1/2 x 1	30	37252	10-3/4 x 14-5/8 x 2-3/8	5	37374	14 x 8-1/8 x 2-3/4	10
37162**/****	5-3/8 x 14-3/4 x 3/4	10	37300	8 x 6-1/2 x 2-1/4	15	37173****	11-1/4 x 2-1/4 x 3/4	60	37368*	14 x 12-3/4 x 1-1/4	12
37158**/****	5-3/8 x 14-3/4 x 1-3/4	5	37400	8 x 8-1/8 x 1	24	37169****	11-1/4 x 2-1/4 x 1-3/4	30	37367*	14 x 12-3/4 x 1-5/8	10
37211	5-7/8 x 4 x 1-1/4	40	37396	8 x 8-1/8 x 1-1/4	20	37172****	11-1/4 x 4-3/4 x 3/4	30	37366*	14 x 12-3/4 x 2-7/8	6
37207	5-7/8 x 4 x 2-3/4	20	37392	8 x 8-1/8 x 2-3/4	10	37168****	11-1/4 x 4-3/4 x 1-3/4	15	37365*	14 x 12-3/4 x 3-5/8	5
37210	5-7/8 x 5-3/8 x 1-1/4	30	37303	8 x 10 x 1	20	37171****	11-1/4 x 7-1/4 x 3/4	20	37381	14 x 16-5/8 x 1	12
37206	5-7/8 x 5-3/8 x 2-3/4	15	37299	8 x 10 x 2-1/4	10	37167****	11-1/4 x 7-1/4 x 1-3/4	10	37373	14 x 16-5/8 x 2-3/4	5
37203*	5-7/8 x 6-1/4 x 1-1/4	24	37295*	8 x 10-3/4 x 1-5/8	12	37170****	11-1/4 x 14-3/4 x 3/4	10	37377	14 x 16-5/8 x 1-1/4	10
37202*	5-7/8 x 6-1/4 x 1-5/8	20	37294*	8 x 10-3/4 x 3-5/8	6	37166****	11-1/4 x 14-3/4 x 1-3/4	5	37281	15-1/4 x 4-3/4 x 1	40
37201*	5-7/8 x 6-1/4 x 2-7/8	12	37386*	8 x 12-3/4 x 1-1/4	12	37362	12 x 4 x 1-1/4	40	37277	15-1/4 x 4-3/4 x 2-1/4	20
37200*	5-7/8 x 6-1/4 x 3-5/8	10	37385*	8 x 12-3/4 x 1-5/8	10	37358	12 x 4 x 2-3/4	20	37273*	15-1/4 x 5-3/16 x 1-5/8	24
37213	5-7/8 x 8-1/8 x 1	24	37384*	8 x 12-3/4 x 2-7/8	6	37361	12 x 5-3/8 x 1-1/4	30	37272*	15-1/4 x 5-3/16 x 3-5/8	12
37209	5-7/8 x 8-1/8 x 1-1/4	20	37383*	8 x 12-3/4 x 3-5/8	5	37357	12 x 5-3/8 x 2-3/4	15	37280	15-1/4 x 6-1/2 x 1	30
37205	5-7/8 x 8-1/8 x 2-3/4	10	37399	8 x 16-5/8 x 1	12	37354*	12 x 6-1/4 x 1-1/4	24	37276	15-1/4 x 6-1/2 x 2-1/4	15
37199*	5-7/8 x 12-3/4 x 1-1/4	12	37395	8 x 16-5/8 x 1-1/4	10	37353*	12 x 6-1/4 x 1-5/8	20	37279	15-1/4 x 10 x 1	20
37198*	5-7/8 x 12-3/4 x 1-5/8	10	37391	8 x 16-5/8 x 2-3/4	5	37352*	12 x 6-1/4 x 2-7/8	12	37275	15-1/4 x 10 x 2-1/4	10
37197*	5-7/8 x 12-3/4 x 2-7/8	6	37302	8 x 20-1/8 x 1	10	37351*	12 x 6-1/4 x 3-5/8	10	37271*	15-1/4 x 10-3/4 x 1-5/8	12
37196*	5-7/8 x 12-3/4 x 3-5/8	5	37298	8 x 20-1/8 x 2-1/4	5	37364	12 x 8-1/8 x 1	24	37270*	15-1/4 x 10-3/4 x 3-5/8	6
37212	5-7/8 x 16-5/8 x 1	12	37251	8-3/4 x 4-5/8 x 1	30	37360	12 x 8-1/8 x 1-1/4	20	37278	15-1/4 x 20-1/8 x 1	10
37208	5-7/8 x 16-5/8 x 1-1/4	10	37248	8-3/4 x 4-5/8 x 2-3/8	15	37356	12 x 8-1/8 x 2-3/4	10	37274	15-1/4 x 20-1/8 x 2-1/4	5
37204	5-7/8 x 16-5/8 x 2-3/4	5	37250	8-3/4 x 7-1/8 x 1	20	37350*	12 x 12-3/4 x 1-1/4	12	37320	17-1/8 x 7-3/4 x 1	20
37293	6 x 4-3/4 x 1	40	37247	8-3/4 x 7-1/8 x 2-3/8	10	37349*	12 x 12-3/4 x 1-5/8	10	37318	17-1/8 x 7-3/4 x 2-1/4	10
37289	6 x 4-3/4 x 2-1/4	20	37249	8-3/4 x 14-5/8 x 1	10	37348*	12 x 12-3/4 x 2-7/8	6	37319	17-1/8 x 16 x 1	10
37285*	6 x 5-3/16 x 1-5/8	24	37246	8-3/4 x 14-5/8 x 2-3/8	5	37347*	12 x 12-3/4 x 3-5/8	5	37217	18-1/4 x 10 x 1	20
37284*	6 x 5-3/16 x 3-5/8	12	37344	10 x 4 x 1-1/4	40	37363	12 x 16-5/8 x 1	12	37215	18-1/4 x 10 x 2-1/4	10
37292	6 x 6-1/2 x 1	30	37340	10 x 4 x 2-3/4	20	37359	12 x 16-5/8 x 1-1/4	10	37216	18-1/4 x 20 x 1	10
37288	6 x 6-1/2 x 2-1/4	15	37269	10 x 4-3/4 x 1	40	37355	12 x 16-5/8 x 2-3/4	5	37214	18-1/4 x 20 x 2-1/4	5
37291	6 x 10 x 1	20	37265	10 x 4-3/4 x 2-1/4	20	37179	12-3/8 x 4-5/8 x 1	30	37195	18-3/4 x 7-3/4 x 1	20
37287	6 x 10 x 2-1/4	10	37261*	10 x 5-3/16 x 1-5/8	24	37176	12-3/8 x 4-5/8 x 2-3/8	15	37193	18-3/4 x 7-3/4 x 2-1/4	10
37283*	6 x 10-3/4 x 1-5/8	12	37260*	10 x 5-3/16 x 3-5/8	12	37178	12-3/8 x 7-1/8 x 1	20	37194	18-3/4 x 16 x 1	10
37282*	6 x 10-3/4 x 3-5/8	6	37343	10 x 5-3/8 x 1-1/4	30	37175	12-3/8 x 7-1/8 x 2-3/8	10	37192	18-3/4 x 16 x 2-1/4	5
37290	6 x 20-1/8 x 1	10	37339	10 x 5-3/8 x 2-3/4	15	37177	12-3/8 x 14-5/8 x 1	10			
37286	6 x 20-1/8 x 2-1/4	5	37336*	10 x 6-1/4 x 1-1/4	24	37174	12-3/8 x 14-5/8 x 2-3/8	5			
37245	6-3/4 x 4-5/8 x 1	30	37335*	10 x 6-1/4 x 1-5/8	20	37191	12-5/8 x 4-3/4 x 1	40			
37242	6-3/4 x 4-5/8 x 2-3/8	15	37334*	10 x 6-1/4 x 2-7/8	12	37187	12-5/8 x 4-3/4 x 2-1/4	20			
37244	6-3/4 x 7-1/8 x 1	20	37333*	10 x 6-1/4 x 3-5/8	10	37183*	12-5/8 x 5-3/16 x 1-5/8	12			
37241	6-3/4 x 7-1/8 x 2-3/8	10	37268	10 x 6-1/2 x 1	30	37182*	12-5/8 x 5-3/16 x 3-5/8	24			
37243	6-3/4 x 14-5/8 x 1	10	37264	10 x 6-1/2 x 2-1/4	15	37190	12-5/8 x 6-1/2 x 1	30			

## ACCESSORIES

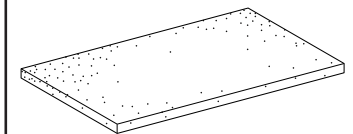
- ESD Handles
- Wire Frames
- Foam Pads



Conductive Plastic Handles



Steel wire perimeter reinforcing frame for extra strength and durability



Permanently static dissipative crosslink bottom foam to cushion circuit boards

Item	Description	Size
37450	ESD Handles	1" x 4"
37451	Bottom Foam	1/4" x 9-3/4" x 16-3/4"
37453	Bottom Foam	1/4" x 12-1/4" x 22-5/8"
37454	Bottom Foam	1/4" x 12-1/2" x 18-1/2"
37452	Bottom Foam	1/4" x 12-5/8" x 16-5/8"
37455	Bottom Foam	1/4" x 14-3/4" x 18-3/8"
37458	Wire Frame	1/4" x 12-1/2" x 18-11/16"
37457	Wire Frame	1/4" x 12-3/4" x 23-1/8"
37456	Wire Frame	1/4" x 13-1/4" x 17-1/4"
37459	Wire Frame	1/4" x 15-1/8" x 18-13/16"