



MICRO-DIMENSIONAL PRODUCTS, Inc.

548 NORTH TROOPER ROAD. NORRISTOWN, PA 19403

Phone: (610) 630-4658. Fax: (610) 630-4763

DESIGN AND MANUFACTURING STANDARDS

TOLERANCES

.010 Radius permissible on corners and edges, 1° draft on side.

Fractional ± 1/64

Decimal ± .01

Angular ± 1°

Metric ± 0.2

GATE AREA

Gate protrusion permissible to .015 maximum.

MATERIAL AND COLOR*

Diallyl phthalate glass filled per mil-M-14F, SDG. Stock color-black nylon per ASTM-D-4066-82 stock color-natural.

*Contact factory for other materials and/or colors.

FEDERAL SUPPLY CODE

Manufacturer's federal supply code is 0ZK84. Federal supply numbers have been assigned to several Mounting Pads. Contact factory for details.

PART NUMBERS

Part numbers consist of five nonsignificant digits and a significant alphabetical suffix.

Example: A. 10001 — DAP (molded in diallyl phthalate)

B. 10001 — N (molded in nylon)

TYPICAL PROPERTIES OF MOLDED MATERIALS

MATERIAL - TYPICAL TRADE NAME	DAP*	NYLON	ALKYD	ACETAL	PC**	EPOXY
Water absorption 0/0 - 24 hours	.05	1.5	.12	.25	.35	.06
Specific gravity	1.74	1.14	2.18	1.41	1.20	1.85
Flexural strength P.S.I.	12,500	410,000	7,000	130,000	110,000	11,500
Compressive strength P.S.I.	27,500	4,900	17,000	5,200	11,000	22,000
Impact strength notched IZOD. ft. lbs./in.	.55	.9	.3	1.4	2	.35
Tensile strength P.S.I.	8,000	11,800	3,500	10,000	8,500	8,000
Flammability in/minutes	S.E +	S.E +	S.E +	1.1	S.E +	S.E +
Heat resistance continuous F°	350°	250°	300°	185°	250°	300°
Thermal expansion in/C° x 10 ⁻⁵	4.2	10	5	8.1	7	4.6

Arc resistance sec.	150	140	180	129	10	180
Dielectric strength short time 1/8" thk v/mil	425	380	375	500	400	400
Dielectric constant 60 cycles v/mil	5.2	4.0	5.7	3.7	3.1	4.4
Approved under military spec.	MIL-M-14F TYPE SDG	ASTM - D-4066-82	MIL-M-14F TYPE MAG	—	—	—

The above figures are a composite of material manufacturer's data, and should be used as reference only.

* DIALLYL PHTHALATE

** POLYCARBONATE

+ SELF EXTINGUISHING



MICRO-DIMENSIONAL PRODUCTS, Inc.

548 NORTH TROOPER ROAD. NORRISTOWN, PA 19403

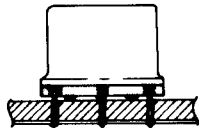
Phone: (610) 630-4658. Fax: (610) 630-4763

TRANSISTOR MOUNTING HARDWARE FOR MORE EFFICIENT CIRCUIT BOARD OPERATION

A Transipad:

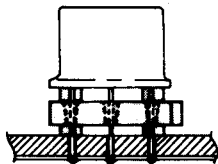
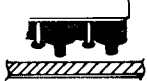
- provides permanent mounting
- eliminates cocking of transistor
- permits good solder fillet
- allows easier inspection
- gives room to wash out flux
- reduces vibration
- elevates, insulates, ventilates during wave-soldering
- keeps transistors uniformly spaced off PC board and during wave-soldering
- reduces chance of glass seal breaking or cracking

ELEVATES, INSULATES, VENTILATES



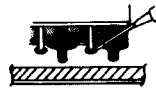
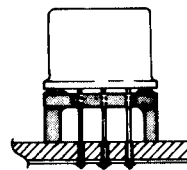
It is good practice to use a Transipad with feet on one side for air circulation and to reduce moisture entrapment.

It is best to use Transipad with feet on both sides for extra elevation and visual solder inspection. Added height helps act as heat sink.

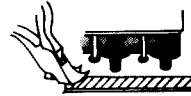


PROVIDES EASY ACCESS TO LEADS

Access to leads from mounting side for inspection of solder joints, test probing and individual clipping of leads for easy removal of failed transistors. Long leads assist in heat sinking at time of soldering, help dissipate heat.



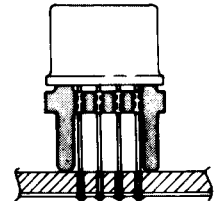
SIMPLIFIES TEST PROBING



FASTER COMPONENT REMOVAL

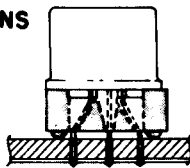
ACTS AS STRAIN RELIEF TO AVOID CRACKING OF HERMETIC SEAL

Free forming of lead is against the Transipad which elevates transistor high off the board providing plenty of space for forming leads.



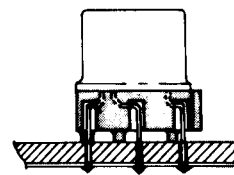
CONVERTS AND POSITIONS LEADS AUTOMATICALLY

Slanting planes molded into Transipad pick up leads and guide them from fixed position to larger diameter pin circle or grid pattern.



USED FOR LEAD FORMING AND FREE FORMING

Slots in Transipad guide leads so that they can be easily positioned manually.



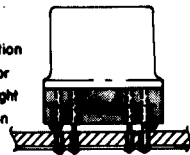
RAPID LEAD PICK-UP FOR EASY LEAD INSERTION

All leads feed through hole as one unit. By automatic rotation of device leads quickly find their own specific positions.



CLEARANCE WELL FOR INTEGRATED CIRCUIT PACKAGE PLASTIC MENISCUS

Transipad eliminates unnecessary elevation of assembly and provides secure base for component to prevent cocking which might occur when transistor is positioned on an unbalanced support base.



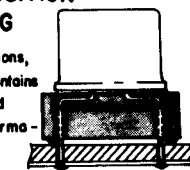
RIM OR FLANGE INSULATOR FOR GREATER PACKAGING DENSITY THROUGH CLOSER MOUNTING OF COMPONENTS

Transipad flange forms an insulating ring around transistor to eliminate possibility of shorting out.



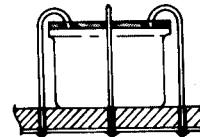
ASSURES SOLID FIXED POSITION FOR PREFORMED MOUNTING

Leads, preformed to the necessary positions, are passed through Transipad which maintains same fixed lead positions. Feet of pad assure solid mounting to prevent deformation of leads and shorting out.



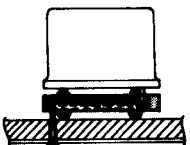
WATERFALL STRAIN RELIEF LEAD SPREADER PROTECTS HERMETIC SEAL FROM CRACKING

Lead is slipped through Transipad and manually formed around it. Pad acts as protective device. Assembly is then inverted, positioned on board and leads are directed back to proper location on circuit board.

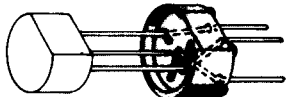


LEAD REVERSER (MECHANICAL OR ELECTRICAL)

Mechanical: Leads pass through Transipad, then the particular lead to be reversed is manually repositioned in the slot on underside of pad.



Electrical: Lead to be spread is automatically picked up and moved to new position.



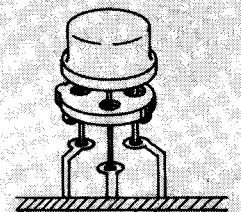
STRAIN RELIEF FOR CONFORMAL COATING

Using a Transipad to obtain extra lead space relieves direct pressure normally resulting from expansion of conformal coating. Additional spacing also promotes operating efficiency by providing easier access to the board for more uniform coating, better encapsulation and more complete under, over, around.

FOR BOARDS WITH LIMITED SPACING

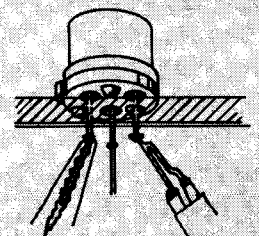
When spacing on printed circuit board is limited, a Transipad provides all the advantages of test probing, lead inspection and access for component removal, yet is more conservative in height.

TYPICAL MOUNTING PROCEDURE



Slip transistor leads through holes in the Transipad.

Transipad aligns leads for uniform above-board component spacing.



Heat sink when soldering the components in place.



MICRO-DIMENSIONAL PRODUCTS, Inc.

548 NORTH TROOPER ROAD. NORRISTOWN, PA 19403

Phone: (610) 630-4658. Fax: (610) 630-4763

CLASSIFIED BY APPLICATION

Type 1 Straight through mounting pads for devices having 3 to 8 leads on a .100 diameter pin center.

Type 2 Straight through mounting pads for devices having 3 to 12 leads on a .200 or .230 diameter pin center.

Type 3 Straight through mounting pads for devices having 3 or 4 leads on a .282 diameter or .200 grid.

Type 4 Straight through mounting pads for devices having 8 to 16 leads on a grid pattern.

Type 5 Straight through mounting or lead conversion for inline devices.

Type 6 Lead conversion: Devices having 3 to 8 leads on a .100 diameter pin center to a larger diameter or grid pattern.

Type 7 Lead conversion: Devices having 3 to 12 leads on a .200 or .230 diameter pin center to a larger diameter.

Type 8 Lead conversion: Devices having 6 to 12 leads on a .200 or .230 diameter pin center to a grid pattern.

Type 9 Lead conversion: 3 to 6 lead devices. Required to convert to an inline configuration or for conversion of inline to circle.

Type 10 BNC Connector Bushings - mounting of receptacle and bulk connectors.

Type 11 Relay Mounting Pads - Typical 1/6, 1/3, 1/2 and TO-5 mounting for crystal can type relays.

Type 12 Capacitor Mounting Pads - Typical disc, axial lead and printed circuit board types.

Type 13 Transistor Boots - Transistor insulating cover.

Type 14 General Purpose Hardware - vertical supports for axial lead components, mounting pads for dual inline packages, insulating bushings and miscellaneous mounting hardware.

CLASSIFIED BY STYLE

Fig. A
Through hole with countersink

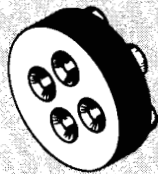


Fig. B
Inside Star



Fig. C
Outside Star

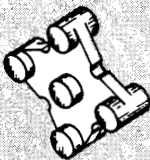


Fig. D
Conversion Slots

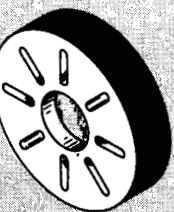


Fig. E
Inside Hole



Fig. F
Outside Slots



Fig. G
Strain Reliever



Fig. H
Rim Insulator



Fig. I
Funnel Conversion

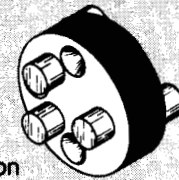


Fig. J
Manual Conversion Grooves

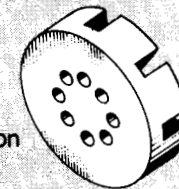


Fig. K
Pie Conversion



Fig. L
Outside Conversion Slots



Fig. M
Underside Lead Reverser

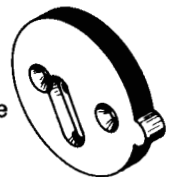


Fig. N
Through hole - no countersink

