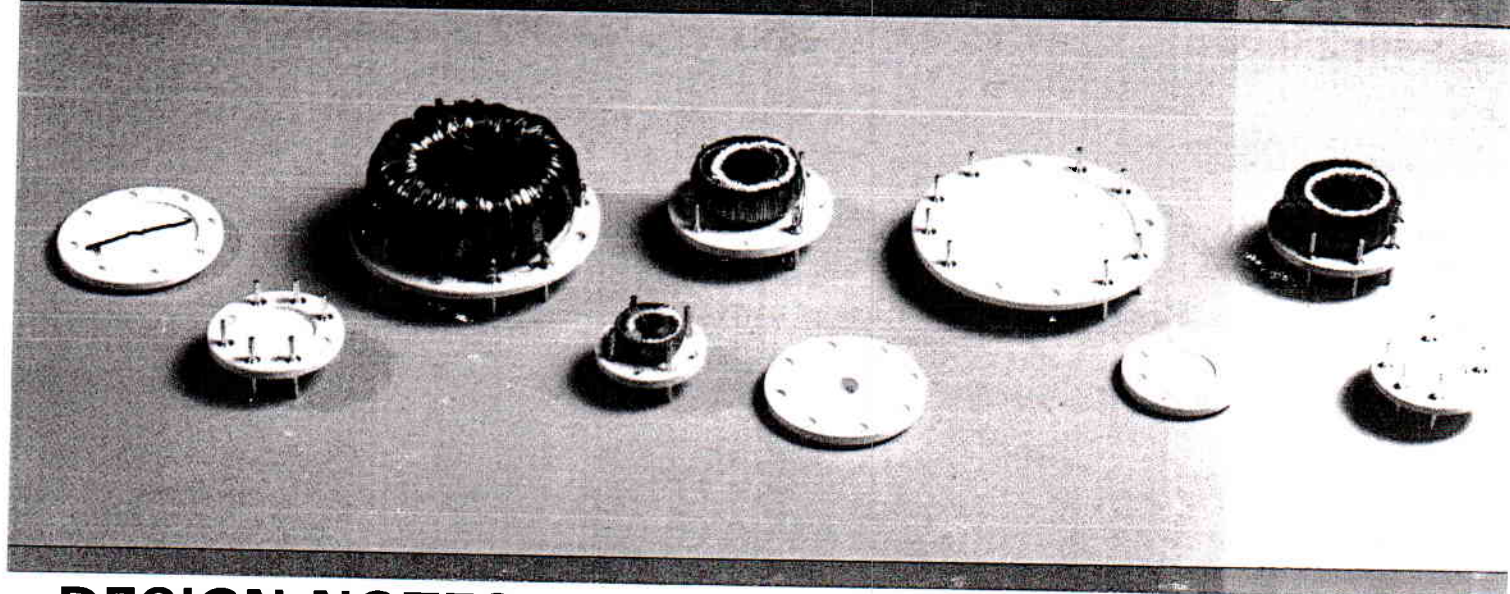




ROBISON ELECTRONICS, INC.

HORIZONTAL TOROID MOUNTING PLATFORMS



DESIGN NOTES:

Robison Horizontal Toroid Mounting Platforms (HTMP) are designed to provide an economical, fast and easy method of attaching toroids to printed circuit boards. Each Toroid Platform features cored holes and standoff feet to allow for the mounting of toroids flat on the printed circuit board. Robison Toroid Platforms are available in twenty-three (23) incremental diameters to meet most size requirements. End users with specific requirements not met by size standards currently offered are encouraged to discuss their requirements with the Robison Electronics technical sales staff.

Robison Horizontal Toroid Mounting Platforms (HTMP) provide a simple mount for securing toroids to printed circuit boards in a clean, efficient manner using minimum board space and epoxy. Lead pin-outs occur on standard pin circles close to a toroid's diameter to minimize printed circuit board area required for toroid installation.

Cored holes molded into the Toroid Platforms permit standardization of product pin-out, keying of pin patterns and variation of pin locations when desired. All Platforms are designed to accept Robison Press-in Pin REI-PIN-037C for use with fine winding wire terminations. With heavy gauge windings, the Toroid Platform can be self-leaded, drilling open the proper holes as required. On most Platforms, a flashed-over hole is provided on the center line to accept a mounting screw when required; flash is easily removed with a drill bit.

Robison Toroid Platforms offer flexibility in design when mounting toroids. Each Platform is designed to fit a standard size Robison Electronics, Inc., encapsulation shell, with the outside diameter of each Platform's pin circle determined by the inside diameter of a standard, available shell. This feature provides the user with the option of encapsulating a toroid, utilizing the Toroid Platform as a header.

When mounting toroids on Toroid Platforms without encapsulation, the toroid should be fixed to the Platform with a quick drying, high strength liquid adhesive to firmly attach the toroid to the Platform.

To provide additional mounting stability and holding strength on the circuit board, Robison Dummy Mounting Pin REI-PIN-041-3C can be incorporated in the Platforms for those situations where there are not sufficient leads from the toroid to create the mounting rigidity desired.

In those applications where additional hold-down is required because of toroid size/weight, a Robison Toroid Cap (VTC) can be placed on the top of the toroid, a nylon flat head screw of the proper length inserted through the Cap, toroid, Platform and circuit board and then secured with a nylon nut to hold the assembly together. Robison Toroid Caps are available in eleven (11) sizes (refer to the Robison Toroid Caps Brochure, Catalog No. C/043091 or the Robison Mounting and Assembly Hardware Catalog, Catalog No. C/040191, for specifications). Nylon screws, nuts and flat washers in a selection of sizes are available from Robison Electronics (refer to Robison Mounting and Assembly Hardware Catalog, Catalog No. C/040191 for specifications).

Robison Rapid Seal, a natural latex-based product, can be used on the outside bottom of a Platform to close unused holes and to seal around lead wires passing through the Platform to prevent epoxy leakage when encapsulating the toroid. It can also be used on the bottom of the toroid to secure the toroid to the inside bottom of the Platform and hold it in position prior to and during mounting (refer to the Robison Rapid Seal Brochure, Catalog No. C/042091, for specifications).

Robison Toroid Mounting Platforms have been designed to ease and simplify the mounting of toroids of varying diameters and thicknesses. Features of the Platforms include:

1. positive locations of leads and mounting hardware.
2. dimensional integrity of the footprint for printed circuit board area determination.
3. an improvement in reliability by allowing formation and inspection of solder fillets on double-sided boards when the assembly is soldered in the printed circuit board.

DESIGN NOTES (Continued)

4. standoff feet enhance reliability by allowing flush cleaning of solder flux residues from underneath the assembly after soldering.
5. rapid installation by the end user of the toroid to the printed circuit board.
6. flexibility in design, with the option of encapsulating the toroid utilizing readily-available standard-size encapsulation shells.

Robison Horizontal Toroid Mounting Platforms and Toroid Caps are molded of Vectra[®], a liquid crystal polymer plastic exhibiting excellent mechanical strength and dimensional stability, high dielectric strength and low coefficient of thermal expansion. Provided in a standard off-white color, Vectra[®] meets the requirements of MIL-M-24519C, Type GLPC-30F. It can be used continuously at 254°C (489°F), has a melt point of 280°C (538°F), is inherently flame retardant and meets the flammability requirements of UL 94V-O. Tolerances are maintained at $\pm .010$ on diameters, $\pm .005$ on all other dimensions except hole diameters, which are maintained at $\pm .002$.

Dummy Mounting Pins and Press-in Pins are manufactured from oxygen-free copper per MIL-W-1276, tin plated per MIL-T-10727, Type 1, bright, or 60/40 tin/lead plate per MIL-P-81728, semi-bright.

Horizontal Toroid Mounting Platforms, as well as all products from Robison Electronics, Inc., are manufactured in the United States. Additional information, including pricing and data to assist in evaluating and utilizing these products is available from Robison Electronics, Inc., 3580 Sacramento Drive, P.O. Box 8121, San Luis Obispo, CA 93403-8121, or by calling (805) 544-8000. From outside California, call toll free (800) 235-4144. FAX: (805) 544-8091.

Brochures are available for the following products and can be obtained by calling or writing Robison Electronics, Inc.:

Toroid Carriers	Catalog No. C/031591
Toroid Mounts	Catalog No. C/091591
Toroid Caps	Catalog No. C/042591
Toroid Caps	Catalog No. C/043091
Core-Bobbin Transformer Platforms ..	Catalog No. C/083191
Wedgits	Catalog No. C/032091
Rapid Seal	Catalog No. C/042091
Mounting and Assembly Hardware	Catalog No. C/040191

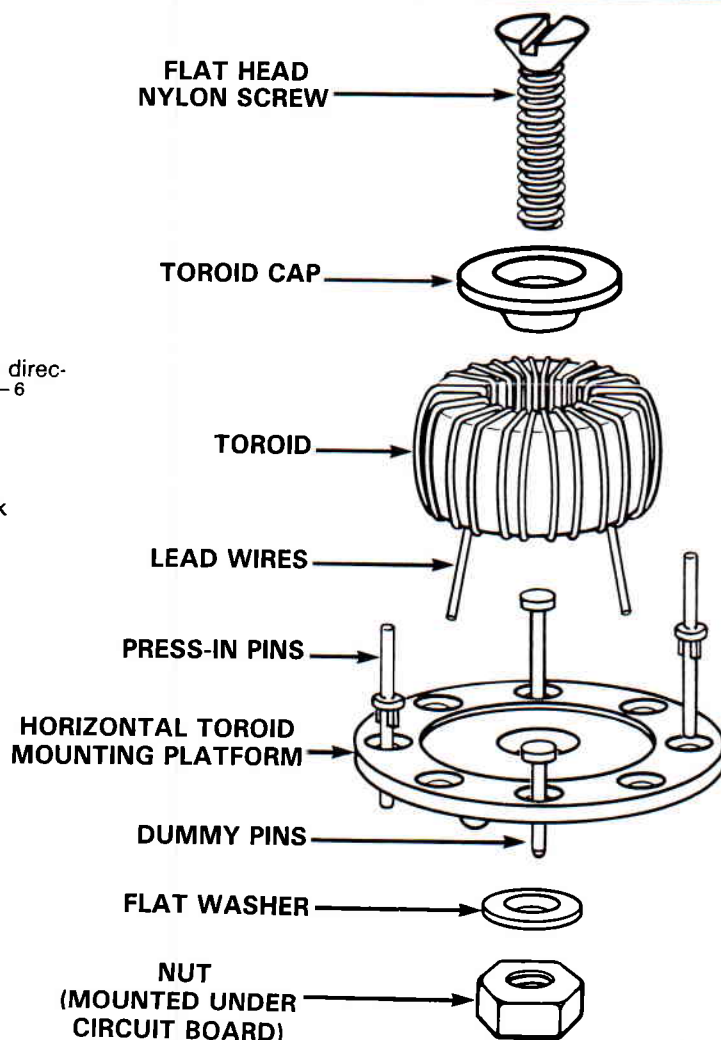
MECHANICAL PROPERTIES

Compressive Strength	25,000 psi
Flexural Strength	11,000 psi
Flexural Modulus	1.4×10^6 psi
Izod Impact Strength	0.85 ft. lb./in.
Tensile Strength	8,500 psi
Heat Distortion	365°F (185°C)
Coefficient of Linear Thermal Expansion	-25° C to 70°C, flow direction, $9 \text{ cm/cm/}^\circ\text{C} \times 10^{-6}$
Specific Gravity	1.84 to 1.91
Water Absorption	to equilibrium 0.02%
Flammability	UL94V-0 @ 0.018 thick

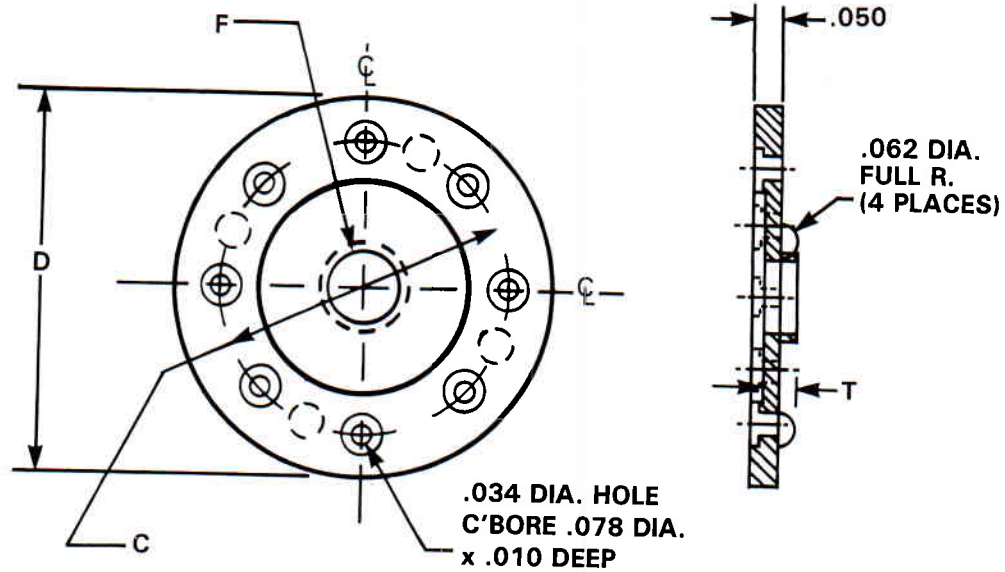
ELECTRICAL PROPERTIES

Arc Resistance	130 sec.
Dielectric Strength—Short Term ..	350V/MIL
Dielectric Constant	3.8 @ 1 MHz
Dissipation Factor	0.012 @ 1 MHz
Volume Resistance	10^{15} (ohm/cm)

DESIGN CONSIDERATIONS



MECHANICAL DETAIL



D Diameter
C Pin Circle of Holes & Standoff Feet
F Diameter of Flashed-over Center Hole

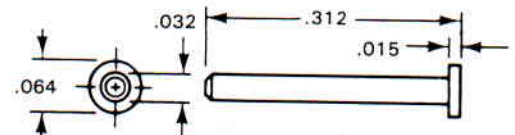
N Number of Holes
T Platform Height (under Toroid)

PART NUMBER TABLE

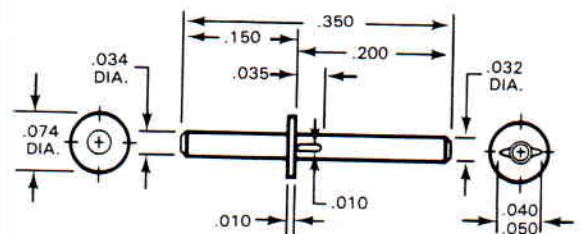
HORIZONTAL TOROID MOUNTING PLATFORMS

PART NUMBER	D	C	F	N	T
HTMP-340080-2	.340	.200	----	4	.080
HTMP-400080-2	.400	.250	----	4	.080
HTMP-470080-2	.470	.350	----	4	.080
HTMP-530055-2	.530	.400	.111	8	.055
HTMP-590055-2	.590	.450	.111	8	.055
HTMP-650055-2	.650	.500	.111	8	.055
HTMP-710060-2	.710	.600	.140	8	.060
HTMP-770060-2	.770	.650	.140	8	.060
HTMP-830060-2	.830	.700	.140	8	.060
HTMP-890060-2	.890	.750	.140	8	.060
HTMP-960060-2	.960	.800	.169	12	.060
HTMP-1020065-2	1.020	.900	.169	12	.065
HTMP-1080065-2	1.080	.950	.169	12	.065
HTMP-1140065-2	1.140	1.000	.169	12	.065
HTMP-1210065-2	1.210	1.050	.169	12	.065
HTMP-1270065-2	1.270	1.100	.169	12	.065
HTMP-1330065-2	1.330	1.200	.169	12	.065
HTMP-1390065-2	1.390	1.250	.169	12	.065
HTMP-1460070-2	1.460	1.300	.169	12	.070
HTMP-1580070-2	1.580	1.450	.169	12	.070
HTMP-1700070-2	1.700	1.550	.196	12	.070
HTMP-1820070-2	1.820	1.650	.196	12	.070
HTMP-1950070-2	1.950	1.800	.196	12	.070

DUMMY PIN: REI-PIN-041-3C



PRESS-IN PIN: REI-PIN-037C



Dummy Mounting Pins, Press-in Pins, Rapid Seal, Toroid Caps and nylon screws and washers are not supplied with Horizontal Toroid Mounting Platforms and must be ordered as separate items.