

High Power Electronic Components for the Wafer Fab Industry

- **CW Magnetrons**
- **Power Tetrodes**
- **Power Triodes**
- **Capacitors**
- **Accessories**

 **Richardson
Electronics**

Richardson Electronics offers a full line of original and replacement components for all aspects of the wafer manufacturing process. From high power capacitors and power tubes to specialty magnetrons and hydrogen thyratrons — Richardson Electronics is your complete source.

If you do not see your part number listed in our brochure we can cross-reference hundreds of components and find the correct part for your application.

Call Richardson Electronics today and discover what one-stop shopping really means!



Richardson Electronics' corporate facility in LaFox, Illinois.

ISO 9001:2008 Registered Distribution Process

We are committed to providing our customers with the highest level of service. While achieving ISO 9001:2008 registration for our distribution centers in the U.S. and Europe, we have streamlined our processes for greater efficiency and accuracy.

Electronic Data Interchange

Like many Fortune 500 customers utilizing our EDI capabilities, you can save time, money and eliminate paperwork. Your purchase order is transmitted to our EDI computer system which mobilizes our distribution logistics team to get the products you need out the door promptly.

Inventory Management Program (RELiable)

Richardson has developed a customer/supplier inventory management interface that allows us to monitor inventory levels of Richardson part numbers at your location. When your inventory goes below pre-established minimum stock levels, we'll automatically create a purchase order and ship your replenishment inventory.

Just-In-Time Delivery

By pre-establishing your order's desired delivery date we will coordinate your specific releases and ship product to meet your needs. This coordination balances product levels to meet your schedules and minimize overstock conditions.

Kitting

Streamline your production, purchasing, receiving and warehouse process by taking advantage of Richardson's kitting capabilities. We can assemble, sort, mark and package the components you need to meet basic or complex requirements.

Cross-Referencing

Our cross-reference library contains hundreds of thousands of part numbers accumulated over 50 years of experience. Selecting the right industry standard product for your application is as easy as calling Richardson Electronics.

Applications Engineering Support

We have assembled a world class RF and DC applications engineering team to support your current designs and future applications. You can also address your design-in questions on-line by emailing us at edg@rell.com.

www.rell.com

Utilize our website as a valuable tool for technical support and current product information and selection.

Crystal Growth, Epitaxial Growth, Ion Implantation and Deposition

The process starts here. We offer the RF tubes you need to maintain stable operating temperatures for uniform crystal growth.

Control of the deposition rate is critical. Tube performance can impact the quality of the process. As an ISO 9001: 2008 registered distributor, we have quality monitoring and control processes in place to assure our vendors' products meet your quality standards. The tubes listed below are designed to exceed your quality standards.

Call your local sales office to have your tube shipped today or to inquire about our complete list of available products.

TUBES

NL045W02	3CW30000H7	6155/QB3/300
RS1007	3CW45000H3	6696A
RS2015CL	3CX1000A7/8283	6960A
RS3021CJ	3CX1500A7/8877	7100003
RS3060CJ	3CX3000A7	7100005
Y810	3CX10000A7/8160	
Y847	4CW25000A	
YC263	4CX10000/8171	
YU1910	4CX10000D	
YU208	4CX250B/7203	
0018-0020	4CX1500B	
018-0034	4971299	
08CP003	5CX1500A	
18-02138	600145	
374-0081-000		
374-0120-000		
374-0153-000		
3CW20222A7		

ACCESSORIES

SK300A
SK1300
SK1306

ION GAUGE TUBES

Richardson Electronics carries a full line of Bayard Alpert ion-gauge tubes to meet your requirements. Richardson Electronics' Cetron brand of ion-gauge tubes are direct replacements for many of the major OEMs original tubes such as Eaton, Granville Phillips, Perkin Elmer Temescal, Varian and Veeco.

Contact your local Richardson sales office with your requirements.



Richardson Electronics maintains the world's most extensive cross-reference guide to manufacturers' equipment including:

- Alcatel
- Balzers
- BOC
- Eaton
- Henry Radio
- Huettinger
- Kaiser
- Lepel
- Materials Research Corp.
- Pillar
- RF Power Products

...and many others.

UV Curing

Single source products can lead to equipment down time. Richardson Electronics has a full line of magnetrons for use in UV curing equipment. Below is a sample of the magnetrons we can deliver off-the-shelf often at a cost savings of more than 30%.

TUBES/MICROWAVE MAGNETRONS

012071	809240	H3862
119010	853310	NL10250-18
119020	2M130-07	NL10250-54
172410	2M130-18	NL10250-64
172420	2M130-31	NL10251-9
256041	2M130-54	NL10251-10
319371	2M130-64	NL10251-3HIGH
786120	2M131-09	NL10251-3LOW
786160	2M131-10	NL10251-4HIGH
809210	319371	NL10251-4LOW

OIL-FILLED MICROWAVE CAPACITORS

N50H2510G	N50H2513G	N50H2590G
N50H2511G	N50H2575G	N50H2595G
N50H2512G		

Etch, Ash and Chamber Clean

Equipment failure is costly at this stage of the process. Richardson supplies matched pairs products that are tested in the manufacturers' equipment. Richardson supplies matched pairs that result in lower cost of ownership and longer tube life. Richardson also offers vacuum capacitors from Jennings, High Energy, and Comet for matching networks. The RF and microwave products listed below are a few of our most popular products.

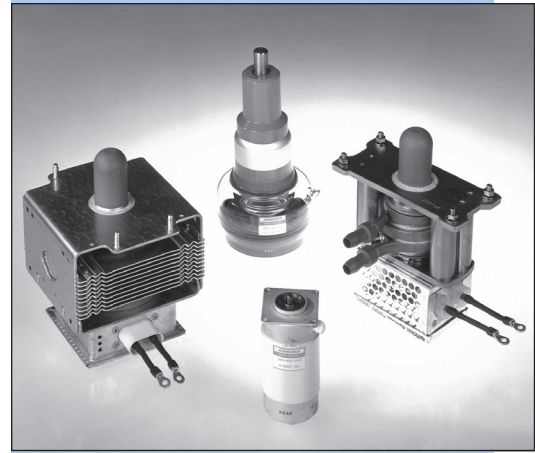
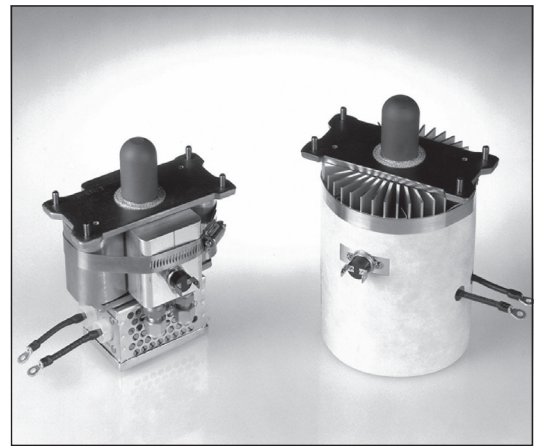
TUBES/MICROWAVE MAGNETRONS

NL10250-1	NL10254-14	NL10254-5
NL10250-10	NL10254-14/CBL	NL10254-6
NL10250-18	NL10254-14MATE	NL10254-8
NL10250-3	NL10254-15	NL10254-9
NL10250-9	NL10254-16	NL10254-9/CABLE
NL10251-3HIGH	NL10254-17	DX582
NL10251-3LOW	NL10254-2	2M121A Series
NL10251-4HIGH	NL10254-20	2M130 Series
NL10251-4LOW	NL10254-3	2M131 Series
NL10254-13	NL10254-4	8877

VACUUM CAPACITORS

CADC-30-XXXX	CVDD-60-XXXX	JCSF-100-XXXX
CMV1-650-XXXX	CVDD-100-XXXX	JCSF-210-XXXX
CMV1-1000-XXXX	CVDD-150-XXXX	UCS-300-XXXX
CMV1-4000-XXXX	CVDD-500-XXXX	UCSF-250-XXXX
CSV1-500-XXXX	CVDD-1000-XXXX	UCSL-500-XXXX
CSVF-500-XXXX	CVDP-2300-XXXX	UCSL-1500-XXXX
CVCD-200-XXXX	GCS-100-XXXX	UCSV-110-XXXX
CVCJ-1000-XXXX	JCSF-80-XXXX	

XXXX = various voltage levels and mounting hardware.



Call your local Richardson sales office for replacement parts for...

- Applied Materials
- Branson
- Gasonics
- Henry Radio
- Lam
- Muegge
- Tegal

...and many others.

Scribing, Packaging and Marking

Richardson Electronics offers the most comprehensive selection of products for laser scribing equipment. Our technical support staff can help trouble shoot equipment failures and improve system performance.

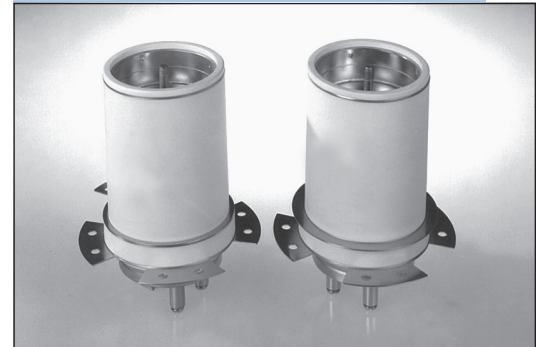
RF and laser products are also utilized in a wide range of back- end processes. Richardson Electronics offers original equipment replacement components, as well as extensive cross-reference tables for all equipment types. We can meet all your system needs with a single phone call. The list below is a sample of the products we offer.

TUBES

C1583	L4945	4CX250BT
CX1154	L4961	4PR400A/8188
CX2608	LS3101S	4PR1000A/8189
F340	LS4101	5949A
HY3003	LS4111	6BK4C
HY3189	NL10277	8613
HY3202	NL10277-1	
HY3204	RS3021CJ	
HY3205	Y497	
L3003	Y497A	
L4003	YU118	
L4902	3-1000Z/8164	
L4905	3-400Z/8163	
L4906		
L4915		

ACCESSORIES

SK406	40211-01
SK410	40216/00
SK506	479056-0003
SK510	8476003-1
122-0275-001	96-17528
280047P1	
280047P2	



Call your local Richardson sales office to order original replacement components from:

- Amperex
- Eimac
- Excelitas
- National
- Thales

...and many others.

Richardson also supplies spare parts for laser systems manufactured by:

- Bystronics
- Coherent
- Convergent Energy
- Lambda Physik
- Lumonics
- Shibuya Kogyo
- Trumpf
- Ushio

...and many others.



Why Richardson Electronics

- Since 1947 we have been providing product solutions to our customers.
- ISO 9001:2008 registered supplier, ensuring our commitment to providing our customers with the highest standard of service.
- A technical sales force that ensures customer support from design-in through after market stages.
- The right mix of distribution and product value-added services enables us to handle standard and custom requirements.
- An extensive inventory of product to ensure we meet your production schedules.

Value-Added Services

- Assembly, Heat Sinks
- Assembly, Printed Circuit Board
- Bar Code Symbology
- Bonded Inventory
- Brazing (Torch, Vacuum, Inert Gas, Hydrogen)
- Breadboarding & Board Stuffing
- Cable and Harness Assembly
- Cross-referencing
- Emergency - Next Flight Out/ 24-Hour Service
- Heatsink, Machining
- Hot Stamping
- Internet Procurement Services
- Inventory Management
- Just-In-Time Deliveries
- Kitting
- Lead Forming
- Machine Shop (Precision & Thick Metal Parts)
- Marking & Component Printing
- Materials Management
- Off-Shore Sourcing
- Packaging (Military or Other)
- Plating, Including Chromate Conversion of Aluminum (Iridite)
- Shipping Services
- Socket Assembly & Modification
- Soldering
- Sorting of Components
- Systems Integration (CCTV)
- Test Fixtures
- Testing to MIL-SPECS
- Testing, Burn-In
- Testing, Compliance
- Testing, Custom
- X-ray Services/Reloading

RICHARDSON ELECTRONICS SALES LOCATIONS

Office Locations	Phone	Fax	Email
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