

GR874® General-Purpose Coaxial Components

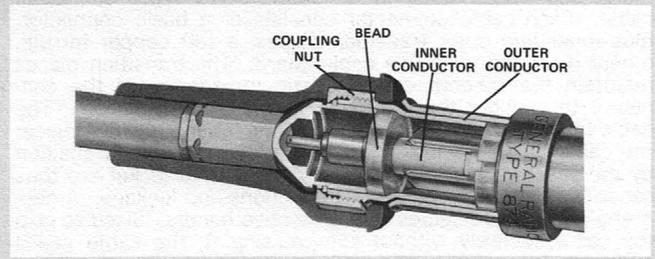
Over 25 years of design refinement GenRad entered the coaxial component field over 25 years ago with the introduction of the GR874® connector. This connector offered not only excellent electrical performance but a major convenience feature — any two, although identical, could be mated. The hermaphrodite, quick-connect GR874 connector was soon joined by a family of circuit elements and adaptors using it. GR874-equipped instruments were added to solve the special measurement problems of vhf and uhf and the availability of these precise measuring instruments in turn made possible a continuous refinement of the basic connector.

A universal choice The GR874 connector has gained wide popularity; highly respected instrument manufacturers have put the electrical and physical advantages of these connectors to good use on their products.

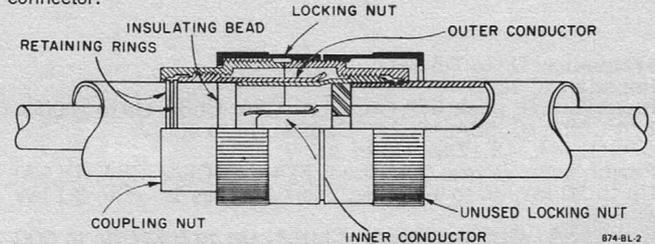
Based on the GR874 connector is a full line of coaxial components and instruments so that a user of the GR874-equipped laboratory need seldom turn to other connector types for a needed element. If he does, there are GR874 adaptors to fit most other common types of connector.

Locking connectors The GR874 connector is available in both the common nonlocking version and a high-performance locking version. The locking version has a threaded coupling nut that permits the two connectors to be mechanically locked together in a stable, semi-permanent union for better electrical repeatability, lower leakage, and less chance of accidental disconnection. The quick-connect/disconnect feature is retained if the coupling nut is not engaged.

Electrical characteristics The GR874 connector has truly outstanding reflection characteristics among standard, general-purpose coaxial connectors in the dc-to-9 GHz frequency range. Its SWR performance is typically superior to that of the type N connector, for example. Its low level of reflections at high frequencies makes the connector of particular value in pulse applications and in time-domain reflectometry. GR874 cable connectors, in fact, offer SWR performance superior to that of any cable with which they can be used and therefore add no significant reflections when used in cabled measurement set-ups. They also provide very low contact resistance, an important requirement to minimize intermodulation in multichannel communications systems.



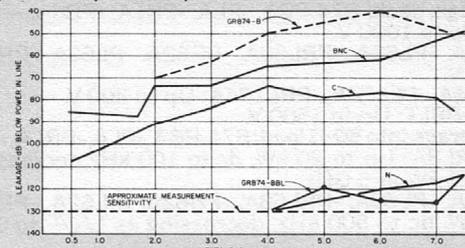
Cutaway view of GR874 basic connector mated with GR874 cable connector.



874-BL-2

Mechanical characteristics The elements of a GR874 connector include an inner conductor, an outer conductor, a supporting polystyrene bead, a phosphor-bronze retaining ring, and a threaded coupling nut. All metal parts are machined and formed to very close tolerances; all are made of hard-drawn brass, except for the center conductor which is heat-treated beryllium copper to ensure good gripping capability and long wear. A bright-alloy finish on all surfaces produces good conductivity for low loss and gives long-lasting protection against tarnish.

Inner and outer conductors are similar in principle; each is a tube with four longitudinal slots in one end, with two opposite quadrants displaced inward. When two connectors are joined, the undisplaced quadrants of one overlap the displaced quadrants of the other.



Leakage — note advantage of locking version (874-BBL).

GR874® 50-Ohm Connectors

Basic Connectors

For use on rigid, 14-mm, air-dielectric 50-Ω coaxial lines or with capacitance, inductance, and resistance standards.

Frequency: Dc to 9 GHz.

Electrical: IMPEDANCE: 50 Ω. INPUT VOLTAGE: Up to 1500 V pk. POWER, average into 50-Ω load: Up to 40 kW, dc to 50 kHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 10 GHz.

Mechanical: DIMENSIONS: Non-locking, 1.19 in. (30 mm) x 0.813 in. (21 mm) dia; locking, same length x 1 in. (25 mm) dia. WEIGHT: 0.2 lb (0.1 kg) net, 1 lb (0.5 kg) shipping.

Description

Catalog Number

Basic 50-Ω Connector
874-B, non-locking
874-BBL, locking

0874-9400
0874-9403

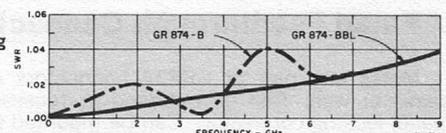
National stock numbers are listed at the back of the catalog.



non-locking



locking



Typical SWR of pairs of connectors

Cable Connectors

For use with more than 40 different RG types of coaxial cable. Each cable connector consists of a basic connector, plus inner and outer transition pieces, a soft copper ferrule, a heat disk, and a flexible cable guard. The transition pieces maintain the 50-ohm characteristic impedance of the connector throughout the reduction to the cable diameter. The cable inner conductor is soldered to the inner transition piece; the cable braid and jacket are crimped to the outer transition by the specially perforated ferrule. Braid and jacket are thus securely fastened, to minimize reflections and leakage. A neoprene cable guard serves as a protective handle. Sized to grip the cable securely without compressing it, the cable guard adds to the quick-connect/disconnect convenience of the connector.

Frequency: Dc to 7.5 GHz.

Impedance: 50Ω.

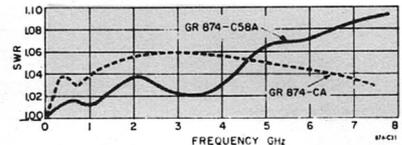
Input Voltage, peak: 874-CA, -CLA, -C8A, -CL8A: Up to 1000 V.
874-C58A, -CL58A, -C62A, -CL62A: Up to 500 V.

Power, average into 50-Ω load: 874-CA, -CLA, -C8A, -CL8A: Up to 20 kW, dc to 100 kHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 5 GHz.

874-C58A, -CL58A, -C62A, -CL62A: Up to 5 kW, dc to 500 kHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 1 GHz.

874-C174A, -CL174A: Up to 1.8 kW, dc to 300 kHz decreasing as $1/\sqrt{f}$ to 0.1 kW at 80 MHz.

Mechanical: DIMENSIONS: 2.69 in. (68 mm) long x 1 in. (25 mm) dia. WEIGHT: 0.2 lb (0.1 kg) net, 1 lb (0.5 kg) shipping.



Average SWR of single connector on infinite length of 50-ohm cable.

Description

Catalog Number

50-Ω Cable Connectors:

For GR 874-A2 Cable:	
874-CA, non-locking	0874-9410
874-CLA, locking	0874-9411
For 50-Ω cable including RG-8A/U, -9B/U, -10A/U, -87A/U, -116/U, -156/U, -165/U, -166/U, 213/U, -214/U, 215/U, -225/U, -227/U, and non-50-Ω cable including RG-11A/U, -12A/U, -13A/U, -638/U, -79B/U, -89/U, -144/U, -146/U, -149/U, -216/U:	
874-C8A, non-locking	0874-9412
874-CL8A, locking	0874-9413
For 50-Ω cable including GR 874-A3, RG-29/U, -55/U series, -58A/U series, -141A/U, -142A/U, -159/U, -23/U:	
874-C58A, non-locking	0874-9414
874-CL58A, locking	0874-9415
For non-50-Ω cable including RG59/U, -62/U series, -71B/U, -140/U, -210/U:	
874-C62A, non-locking	0874-9416
874-CL62A, locking	0874-9417
For 50-Ω cable including RG-174/U, -188/U, -316/U, and non-50-Ω cable including RG-161/U, -187/U, -179/U:	
874-C174A, non-locking	0874-9418
874-CL174A, locking	0874-9419

Panel Connectors

For use on equipment panels. Connectors are available to fit popular cable sizes and wire leads. They are mounted to a panel by means of a flange and four screws; the non-locking connector can be mounted either front or back. The recessed connectors protrude forward only 0.13 in. (3.2 mm), for space saving and neatness.

Frequency: Dc to 7.5 GHz.

Impedance: 50Ω.

Input Voltage, peak: 874-PBA, -PLA, -PRLA, -PB8A, -PL8A, -PRL8A: Up to 1000 V.

874-PB58A, -PL58A, -PRL58A, -PB62A, -PL62A, -PRL62A: Up to 500 V.

874-PB174A, -PL174A, -PRL174A: Up to 300 V.

874-PLT, -PRLT: Up to 1500 V.

Power, average into 50-Ω load: 874-PBA, -PLA, -PRLA, -PB8A, -PL8A, -PRL8A: Up to 20 kW, dc to 100 kHz decreasing as $1/\sqrt{f}$ to 0.1 kW at 5 GHz.

874-PB58A, -PL58A, -PRL58A, -PB62A, -PL62A, -PRL62A: Up to 5 kW, dc to 500 kHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 1 GHz.

874-PB174A, -PL174A, -PRL174A: Up to 1.8 kW, dc to 300 kHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 80 MHz.

874-PLT, -PRLT: Up to 40 kW, dc to 50 kHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 10 GHz.

Mechanical: WEIGHT: 0.2 lb (0.1 kg) net, 1 lb (0.5 kg) shipping.



non-locking

locking

recessed

50-Ω Panel Connectors:

For GR 874-A2 Cable:	
874-PBA, non-locking	0874-9440
874-PLA, locking	0874-9441
874-PRLA, recessed locking	0874-9461
For 50-Ω cable including RG-8A/U, -9B/U, -10A/U, -87A/U, -116/U, -156/U, -165/U, -166/U, -213/U, -214/U, -215/U, -225/U, -227/U, and non-50-Ω cable including RG-11A/U, -12A/U, -13A/U, -63B/U, -79B/U, -89/U, -144/U, -149/U, -216/U:	
874-PB8A, non-locking	0874-9442
874-PL8A, locking	0874-9443
874-PRL8A, recessed locking	0874-9463
For 50-Ω cable including GR 874-A3, RG-29/U, -55/U series, -58/U series, -141A/U, -142/U, -159/U, -223/U:	
874-PB58A, non-locking	0874-9444
874-PL58A, locking	0874-9445
874-PRL58A, recessed locking	0874-9465
For non-50-Ω cable including RG59/U, -62/U series, -71B/U, -140/U, -210/U:	
874-PB62A, non-locking	0874-9446
874-PL62A, locking	0874-9447
874-PRL62A, recessed locking	0874-9467
For 50-Ω cable including RG-174/U, -188/U, -316/U, and non-50-Ω cable including RG-161/U, -187/U, -179/U:	
874-PB174A, non-locking	0874-9448
874-PL174A, locking	0874-9449
874-PRL174A, recessed locking	0874-9469
For Wire Leads:	
874-PLT, locking	0874-9459
874-PRLT, recessed locking	0874-9479

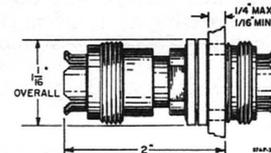
Panel Feedthrough Connector

Mates any pair of GR874 connectors directly through a panel or wall. Can be mounted as recessed or nonrecessed panel locking connector. Can be mounted through thick bulkheads 0.25 to 2 inches (51 mm), or more, in thickness by counterboring.

Electrical: IMPEDANCE: 50 Ω, nominal. INPUT VOLTAGE: Up to 1500 V pk. POWER, average into 50-Ω load: Up to 40 kW, dc to 50 kHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 10 GHz.

National stock numbers are listed at the back of the catalog.

92 GR874® CONNECTORS



874-PFL Panel Feedthrough Connector

0874-9451

GR874® 50-Ohm Adaptors

Conversion These adaptors provide easy conversion from the GR874® connector to most popular military and industrial coaxial connectors. Many of the adaptors are available with locking GR874 connectors to allow semi-permanent attachment of the adaptor while ensuring stable electrical performance.

Without degradation GR874 adaptors extend the usefulness of GR874 connectors without sacrificing electrical performance. The SWR of the combination of GR874 connector and GR874 adaptor is actually comparable to that of the "other series" connector alone.

Excellent for OEM applications Original-equipment manufacturers recognize the possibilities of these adaptors in combination with the GR874 recessed panel connector. An instrument originally equipped with these connectors can be quickly converted by means of appropriate GR874 adaptors to almost any coaxial connector series; the resulting panel connector protrudes less than an inch in front of the panel.

50-Ohm Adaptor Kit

■ fifteen adaptors in one neat package provide the answer to the connector dilemma

Tame the connector menagerie Your device is fitted with type N connectors, your test equipment with UHF, and your patch cords with BNC — is that what plagues you? Or have you just wasted ten minutes trying to force one SMA plug onto another? Frustrating as these experiences may be, they're inevitable because of the multitude of connector types available to manufacturers. There is a bright side, however, and it comes in the form of a small gray box from GenRad. The box contains 15 different adaptor types that allow you to connect to any of 9 popular commercial and military connector types — conveniently and with a minimum of the usual fumbling.

With a double approach All adaptors in the kit have one connector type in common, the GR874. These connectors are hermaphroditic; i.e., any two, although identical, can be plugged together — no more worrying about whether you need a jack or a plug or whatever.

One approach to the problem is simply to connect the appropriate adaptor to each end of a GR874® patch cord and then connect it from one device to the other.

Replace countless adaptors Because any two GR874 adaptors mate, a few of them can perform a cross-connection task that would otherwise involve a costly collection of direct adaptors. For example, interconnection of types BNC, C, Microdot, N, TNC, and UHF plugs and jacks would require 72 direct adaptors, whereas only 12 GR874 adaptors are needed to do the same job. (See Table.)

The mathematics of coaxial adaptors
 GIVEN: n types of coaxial connectors
 FIND: the number of adaptors required to be able to interconnect any jack or plug to any other one.

n	With standard coaxial adaptors: $2n(n-1)$	With GenRad coaxial adaptors: $2n$
2	4	4
4	20	8
6	60	12
8	112	16

Equally simple is a second approach. Connect one adaptor to another, with the second adaptor appropriate to whatever type of patch cord you have available.

Supplied: In addition to the adaptors listed below, the kit also includes one 874-T tee connector to connect stubs and other elements in shunt with a coaxial line, one 874-EL 90° ell right-angle line section, and one 874-R33 three-foot 50-Ω cable terminated on one end with a GR874 connector and on the other with banana plugs.

Qty	Contains GR874 and	GR Type	Qty	Contains GR874 and	GR Type
2	BNC jack	874-QBJA	1	SMA jack	874-QMMJ
2	BNC plug	874-QBPA	1	SMA plug	874-QMMP
1	C jack	874-QCJA	1	TNC jack	874-QTNJ
1	C plug	874-QCP	1	TNC plug	874-QTNP
1	HN jack	874-QHJA	2	UHF jack	874-QUJ
1	HN plug	874-QHPA	2	UHF plug	874-QUP
3	N jack	874-QNJA	1	banana jacks	874-Q2
3	N plug	874-QNP			(See also preceding paragraph.)

Mechanical: All components housed in a rugged steel case with piano hinge, 2 clasps, and carrying handle. DIMENSIONS: (wxhxd): 18.5x4x7 in. (470x102x178 mm). WEIGHT: 4.5 lb (2.1 kg) net, 6 lb (2.8 kg) shipping.

Description	Catalog Number
874-9099 Adaptor Kit	0874-9099



GR874® 50-Ohm Adaptors

Adaptors to BNC

Four adaptors are available; two include a BNC jack with either a non-locking or a locking GR874 connector, and two include a BNC plug with either a non-locking or a locking GR874 connector.

Frequency: Dc to 8.5 GHz.

Electrical: IMPEDANCE: 50 Ω , nominal. INPUT VOLTAGE: Up to 500 V pk. POWER, average into 50- Ω load: Up to 5 kW, dc to 500 kHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 1 GHz.

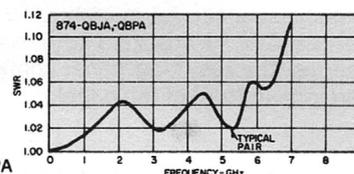
Mechanical: WEIGHT: 0.2 lb (0.1 kg) net, 1 lb (0.5 kg) shipping.



874-QBJA



874-QBPA



Description

Catalog Number

50- Ω Adaptors to BNC

874-QBJA, BNC jack, non-locking GR874 connector

0874-9700

874-QBJL, BNC jack, locking GR874 connector

0874-9701

874-QBPA, BNC plug, non-locking GR874 connector

0874-9800

874-QBPL, BNC plug, locking GR874 connector

0874-9801

Adaptors to C

Two adaptors are available; one includes a type C jack, and the other includes a type C plug. Each uses a non-locking GR874 connector on the other end.

Frequency: Dc to 8.5 GHz.

Electrical: IMPEDANCE: 50 Ω nominal. INPUT VOLTAGE: Up to 1000 V pk. POWER, average into 50- Ω load: Up to 20 kW, dc to 100 kHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 5 GHz.

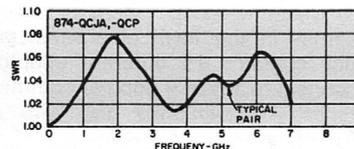
Mechanical: WEIGHT: 0.2 lb (0.1 kg) net, 1 lb (0.5 kg) shipping.



874-QCJA



874-QCP



50- Ω Adaptors to C

874-QCJA, C jack, non-locking GR874 connector

0874-9702

874-QCP, C plug, non-locking GR874 connector

0874-9802

Adaptors to HN

Two adaptors are available; one includes a type HN jack and the other includes a type HN plug. Each uses a GR874 non-locking connector on the other end.

Frequency: Dc to 8.5 GHz.

Electrical: IMPEDANCE: 50 Ω , nominal. INPUT VOLTAGE: Up to 1500 V pk. POWER, average into 50- Ω load: Up to 40 kW, dc to 50 kHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 10 GHz.

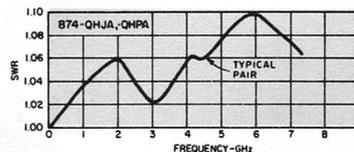
Mechanical: WEIGHT: 0.2 lb (0.1 kg) net, 1 lb (0.5 kg) shipping.



QHJA



QHPA



50- Ω Adaptors to HN

874-QHJA, HN jack, non-locking GR874 connector

0874-9704

874-QHPA, HN plug, non-locking GR874 connector

0874-9804

Adaptors to Microdot

Two adaptors are available; one includes a Microdot jack, and the other includes a Microdot plug. Each uses a non-locking GR874 connector on the other end.

Frequency: Dc to 4 GHz.

Electrical: IMPEDANCE: 50 Ω , nominal. INPUT VOLTAGE: Up to 300 V pk. POWER, average into 50- Ω load: Up to 1.8 kW, dc to 300 kHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 80 MHz.

Mechanical: WEIGHT: 0.2 lb (0.1 kg) net, 1 lb (0.5 kg) shipping.



874-QMDJ



874-QMDP

50- Ω Adaptors to Microdot

874-QMDJ, Microdot jack, non-locking GR874 connector

0874-9720

874-QMDP, Microdot plug, non-locking GR874 connector

0874-9820

National stock numbers are listed at the back of the catalog.

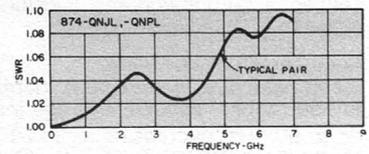
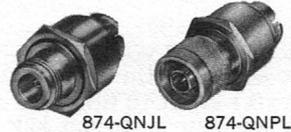
Adaptors to N

Four adaptors are available; two include a type N jack with either a non-locking or a locking GR874 connector, and two include a type N plug with either a non-locking or a locking GR874 connector.

Frequency: Dc to 8.5 GHz.

Electrical: IMPEDANCE: 50 Ω , nominal. INPUT VOLTAGE: Up to 1000 V pk. POWER, average into 50- Ω load: Up to 20 kW, dc to 100 kHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 5 GHz.

Mechanical: WEIGHT: 0.2 lb (0.1 kg) net, 1 lb (0.5 kg) shipping.



Description

Catalog Number

50- Ω Adaptors to N

874-QNJA, N jack, non-locking GR874 connector
874-QNJL, N jack, locking GR874 connector
874-QNP, N plug, non-locking GR874 connector
874-QNPL, N plug, locking GR874 connector

0874-9710
0874-9711
0874-9810
0874-9811

Adaptors to SMA

Four adaptors are available; two include an SMA jack with either a non-locking or a locking GR874 connector, and two include an SMA plug with either a non-locking or a locking GR874 connector. These adaptors also mate with NPM, STM, and others.

Frequency: Dc to 8.5 GHz.

Electrical: IMPEDANCE: 50 Ω , nominal. INPUT VOLTAGE: Up to 300 V pk. POWER, average into 50- Ω load: Up to 1.8 kW, dc to 300 kHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 80 MHz.

Mechanical: WEIGHT: 0.2 lb (0.1 kg) net, 1 lb (0.5 kg) shipping.



50- Ω Adaptors to SMA

874-QMMJ, SMA jack, non-locking GR874 connector
874-QMMJL, SMA jack, locking GR874 connector
874-QMMP, SMA plug, non-locking GR874 connector
874-QMMP L, SMA plug, locking GR874 connector

0874-9722
0874-9723
0874-9822
0874-9823

Adaptors to TNC

Two adaptors are available; one includes a TNC jack, and the other includes a TNC plug. Each uses a non-locking GR874 connector on the other end.

Frequency: Dc to 8.5 GHz.

Electrical: IMPEDANCE: 50 Ω , nominal. INPUT VOLTAGE: Up to 500 V pk. POWER, average into 50- Ω load: Up to 5 kW, dc to 500 kHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 1 GHz.

Mechanical: WEIGHT: 0.2 lb (0.1 kg) net, 1 lb (0.5 kg) shipping.

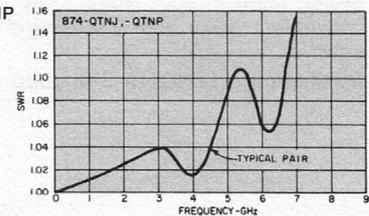
Description

Catalog Number

50- Ω Adaptors to TNC

874-QTNJ, TNC jack, non-locking GR874 connector
874-QTNP, TNC plug, non-locking GR874 connector

0874-9716
0874-9816



Adaptors to UHF

Three adaptors are available; two include a UHF jack with either a non-locking or a locking GR874 connector, and one includes a UHF plug with a non-locking GR874 connector.

Electrical: IMPEDANCE: 50 Ω , nominal. INPUT VOLTAGE: Up to 500 V pk. POWER, average into 50- Ω load: Up to 5 kW, dc to 500 kHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 1 GHz.

Mechanical: WEIGHT: 0.2 lb (0.1 kg) net, 1 lb (0.5 kg) shipping.



50- Ω Adaptors to UHF

874-QUJ, UHF jack, non-locking GR874 connector
874-QUJL, UHF jack, locking GR874 connector
874-QUP, UHF plug, non-locking GR874 connector

0874-9718
0874-9719
0874-9818

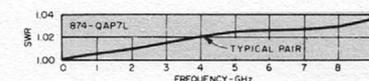
Adaptor to 7-mm Precision

One adaptor is available and includes an Amphenol APC-7, 7-mm precision, connector on one end and a locking GR874 connector on the other end.

Frequency: Dc to 8.5 GHz.

Electrical: IMPEDANCE: 50 Ω , nominal. INPUT VOLTAGE: Up to 1000 V pk. POWER, average into 50- Ω load: Up to 20 kW, dc to 100 kHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 5 GHz.

Mechanical: WEIGHT: 0.2 lb (0.1 kg) net, 1 lb (0.5 kg) shipping.



50- Ω Adaptor to 7-mm Precision

874-QAP7L, Amphenol APC-7, locking GR874-connector

0874-9791

National stock numbers are listed at the back of the catalog.

Adaptor to GR900® Connector

One adaptor is available and includes a GR900 precision connector on one end and a locking GR874 connector on the other end.

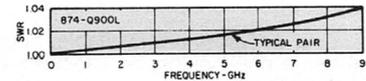
Frequency: Dc to 8.5 GHz.

Electrical: IMPEDANCE: 50 Ω , nominal. INPUT VOLTAGE: Up to 1500 V pk. POWER, average into 50- Ω load: Up to 40 kW, dc to 50 kHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 10 GHz.

Mechanical: WEIGHT: 0.2 lb (0.1 kg) net, 1 lb (0.5 kg) shipping.



874-Q900L



Description

Catalog Number

50- Ω Adaptor to GR900

874-Q900L, GR900 and locking GR874 Connectors

0874-9709

Adaptor to Binding Posts

One adaptor is available and includes a pair of 0.75-in.-spaced binding posts on one end and a non-locking GR874 connector on the other end. Mates with banana plugs. (Note: A single post is also available, on the 874-MB Coupling Probe.)

Mechanical: WEIGHT: 0.2 lb (0.1 kg) net, 1 lb (0.5 kg) shipping.



874-Q2

50- Ω Adaptor to binding post

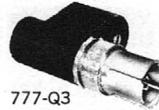
874-Q2, jacks, non-locking GR874 connector

0874-9870

Adaptors to Banana Plugs

Two adaptors are available; each includes a pair of 0.75-in.-spaced banana plugs and a non-locking GR874 connector on the other end. One adaptor is completely shielded; the other has unshielded banana plugs.

Mechanical: WEIGHT: 0.2 lb (0.1 kg) net, 1 lb (0.5 kg) shipping.



777-Q3



874-Q10

50- Ω Adaptors to banana plugs

777-Q3, shielded plugs

874-Q10, unshielded plugs

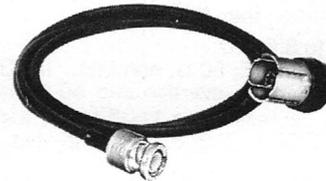
0777-9703

0874-9876

BNC Plug with Cable and GR874® Connector

50- Ω shielded cable connects between BNC jack and GR874 coaxial connector. The GR874 end has the space-saving hammerhead shape (axis perpendicular to cable), so convenient when your cable runs parallel to the instrument panel.

Mechanical: LENGTH: 3 ft. (920 mm). NET WEIGHT: 3 oz (85 g).



776-B Patch Cord

0776-9702

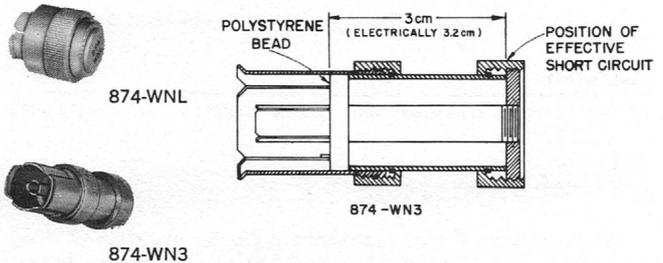
GR874[®] Terminations and Attenuators for 50-Ohm Systems

Short-Circuit Terminations

Short-circuit terminations are useful in establishing initial coaxial line-length conditions for impedance measurements. Each termination consists of a fixed short-circuit mounted in a GR874 connector. Each of three versions has a counterpart open-circuit termination.

Frequency: Dc to 7 GHz; to 9 GHz if connector is locked.
Plane Position: Short-circuit plane is effectively 0 to 0.07 cm toward load from the generator face of bead, except in -WN3 where it is 3.2 cm (see drawing). (3.2 cm correspond to the bead-to-reference-plane distance in 874-ML Component Mount).

Mechanical: WEIGHT: 0.2 lb (0.1 kg) net, 1 lb (0.5 kg) shipping.



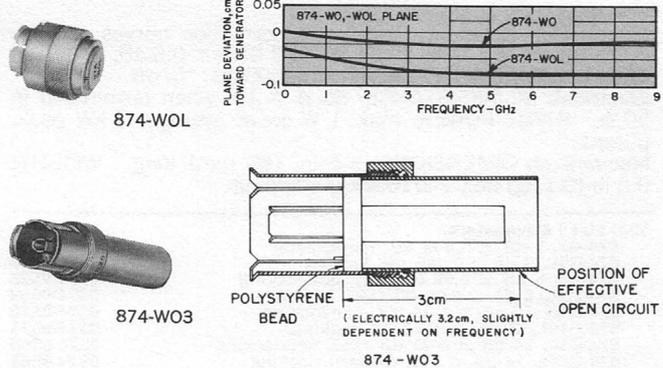
Description	Catalog Number
Short-Circuit Terminations for 50-Ω Lines	
874-WN, non-locking GR874 connector	0874-9970
874-WNL, locking GR874 connector	0874-9971
874-WN3, non-locking GR874 connector	0874-9972

Open-Circuit Terminations

Open-circuit terminations are useful in establishing initial coaxial line-length conditions for impedance measurements and as a shielding cap for open-circuited lines.

Frequency: Dc to 7 GHz; to 9 GHz if locked.
Plane Position: (effective position of open-circuit plane, measured from generator face of bead, toward load): 0 to 0.05 cm, for 874-WO; 0 to 0.10 cm, for -WO3, see curve; 3.2 cm, for -WO3, see drawing. The latter position corresponds to that of the short-circuit plane in the 874-WN3 (3.2 cm also correspond to the bead-to-reference-plane distance in 874-ML Component Mount).

Mechanical: WEIGHT: 0.2 lb (0.1 kg) net, 1 lb (0.5 kg) shipping.

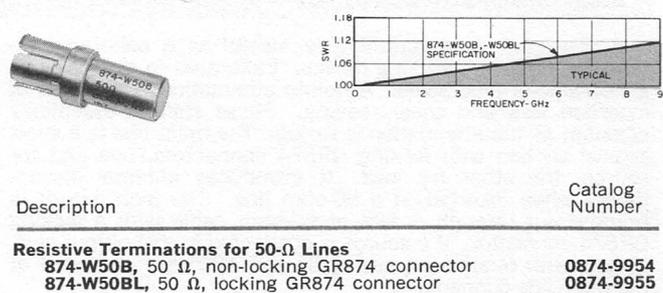


Description	Catalog Number
Open-Circuit Terminations for 50-Ω Lines	
874-WO, non-locking GR874 connector	0874-9980
874-WOL, locking GR874 connector	0874-9981
874-WO3, non-locking GR874 connector	0874-9982

Resistive Terminations

Resistive terminations are useful in slotted-line measurements and for checking accuracy of network analyzers, directional couplers, bridges, and admittance meters. The known location of a purely resistive termination permits the production of many known complex impedances through the addition of sections of 874-L Air Line, fixed or adjustable.

Frequency: Dc to 9 GHz.
Dc Resistance: 50 Ω ± 0.5%.
Electrical: POWER, max continuous: 2 W. SWR: < 1.005 + 0.013 f_{GHz}; also see curves.
Mechanical: WEIGHT: 0.2 lb (0.1 kg) net, 1 lb (0.5 kg) shipping.



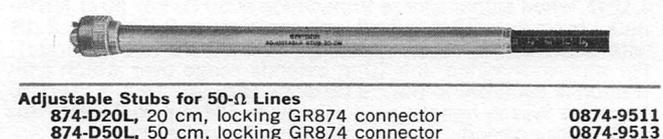
Description	Catalog Number
Resistive Terminations for 50-Ω Lines	
874-W50B, 50 Ω, non-locking GR874 connector	0874-9954
874-W50BL, 50 Ω, locking GR874 connector	0874-9955

Adjustable Stubs

For matching or tuning, for use as adjustable short-circuit terminations, and as reactive elements. With an external indicator, the stub can function as a reaction-type wavemeter. Stub consists of a coaxial line with a sliding short circuit of the multiple-spring-finger type.

Frequency: Dc to 8.5 GHz.
Length: 874-D20L: 20 cm max travel, calibrated in electrical distance from junction in 874-T tee to plane of short circuit. 874-D50L: 50 cm max travel, not calibrated but has an adjustable reference marker.

Electrical: IMPEDANCE: 50 Ω, nominal.
Mechanical: NET WEIGHT: 874-D20L, 0.5 lb (0.2 kg); 874-D50L, 0.9 lb (0.4 kg).



Description	Catalog Number
Adjustable Stubs for 50-Ω Lines	
874-D20L, 20 cm, locking GR874 connector	0874-9511
874-D50L, 50 cm, locking GR874 connector	0874-9513

National stock numbers are listed at the back of the catalog.

Variable Capacitor

Tuning element for resonant-line circuits, matching transformers, and baluns at low frequencies where line-type elements are awkward to use. Well shielded, Rexolite* insulation, precision ball bearings. Linear capacitance variation.

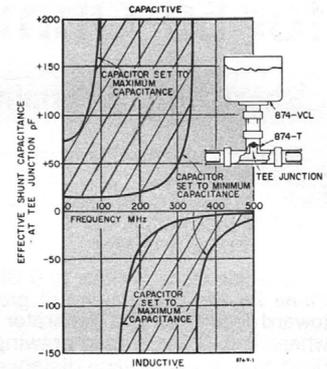
Frequency: <500 MHz, typical.

Capacitance at low frequencies: 14 to 70 pF at connector, 16.5 to 72.5 pF at junction of 874-T Tee. Refer to graph.

Mechanical: DIMENSIONS: 5.25 in. (133 mm) long x 2.5 in. (64 mm) dia. WEIGHT: 0.8 lb (0.4 kg) net.

* Registered trademark of Brand Rex Division, American Enka Corporation.

Description	Catalog Number
874-VCL Variable Capacitor, with locking GR874 connector	0874-9931



Fixed Attenuators

Single-section, F type resistance pads, for insertion of fixed attenuation in 50-ohm systems and for isolation and matching to 50 ohms over a broad frequency range. Each attenuator consists of one disk and two cylindrical resistors, as shunt and series elements respectively. The 6-, 14-, and 20-dB attenuators are particularly convenient in pulse applications as voltage dividers.

Frequency: Dc to 4 GHz.

Attenuation Accuracy (relative to correction curves shown): ± 0.2 dB, dc to 1 GHz; ± 0.4 dB, to 2 GHz; ± 0.6 dB, to 4 GHz. TEMPERATURE COEFFICIENT: <0.0003 dB/°C/dB.

Electrical: DC RESISTANCE: $50 \Omega \pm 1\%$ when terminated in 50Ω . INPUT POWER, max: 1 W cw or average; 2 kW peak, pulsed.

Mechanical: DIMENSIONS: 3.5 in. (89 mm) long. WEIGHT: 0.2 lb (0.1 kg) net, 1 lb (0.5 kg) shipping.

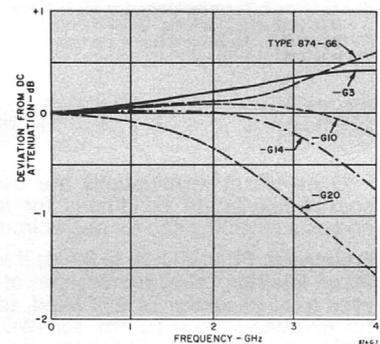
50- Ω Fixed Attenuators*

874-G3, 3 dB ± 0.045 dB, non-locking	0874-9564
874-G3L, 3 dB ± 0.045 dB, locking	0874-9565
874-G6, 6 dB ± 0.09 dB (X2), non-locking	0874-9568
874-G6L, 6 dB ± 0.09 dB (X2), locking	0874-9569
874-G10, 10 dB ± 0.15 dB, non-locking	0874-9570
874-G10L, 10 dB ± 0.15 dB, locking	0874-9571
874-G14, 14 dB ± 0.21 dB (X5), non-locking	0874-9560
874-G14L, 14 dB ± 0.21 dB (X5), locking	0874-9561
874-G20, 20 dB ± 0.30 dB (X10), non-locking	0874-9572
874-G20L, 20 dB ± 0.30 dB (X10), locking	0874-9573

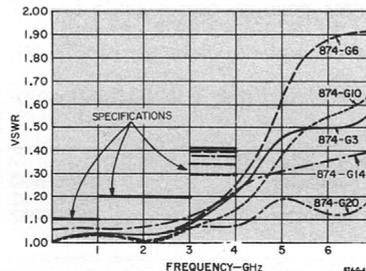
* Connector on each end; locking or non-locking, as noted.



874-G, non-locking



Correction factor



Typical and specified SWR

Adjustable Attenuator

A waveguide-below-cutoff type, useful as a calibrated attenuator or as a sampling device. Calibrated in decibels, on a micrometer-type scale. Absolute attenuation is the sum of insertion loss and scale reading. Phase shift is essentially constant as the attenuation is varied. The main line is a short coaxial section with locking GR874 connectors, one end for source, the other for load. It introduces minimal discontinuity when inserted in a 50-ohm line. The loop output is brought out through 3 feet of 50-ohm cable with a locking GR874 connector. If a source is connected to this output port, signals with relative phases of 0° and 180° are produced at the main line connectors.

Frequency: 100 MHz to 4 GHz.

Relative Attenuation: RANGE: 120 dB, with main line terminated in 50Ω ; 129 dB, with main line terminated in adjustable stub, set to minimize electric field at the coupling point. MICROMETER SCALE: -9 to 120 dB. ACCURACY: For $50\text{-}\Omega$ terminated input, $\pm (0.015 \times \text{difference in scale readings} + 0.2)$ dB, when corrected; correction chart is supplied. For stub-terminated input, $\pm (0.01 \times \text{difference in scale readings} + 0.2)$ dB, direct reading.

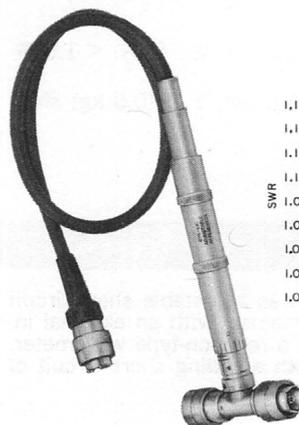
Insertion Loss from input connector to end of output cable at 1 GHz, when signal source impedance is 50Ω : For $50\text{-}\Omega$ terminated main line, 30.4 ± 2 dB with scale set at 0 dB; 17 ± 2 dB with scale set at -9 dB (settings below 0 dB not accurate). For stub-terminated unit (that extends range over which calibration is accurate to the -9 dB scale setting), 19 ± 2 dB min. Insertion loss is approx proportional to $1/f$, up to 1 GHz. Insertion loss directly through main line is negligible.

National stock numbers are listed at the back of the catalog.

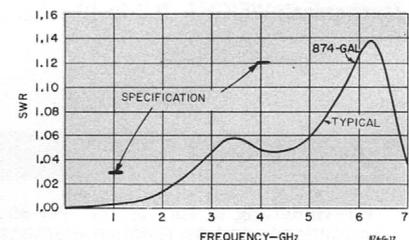
SWR: MAIN LINE: < 1.03 at 1 GHz, < 1.12 from 1 to 4 GHz. OUTPUT: < 4 at 1 GHz, < 5 from 1 to 4 GHz.

Electrical: INPUT POWER, max: 300 W at 1 GHz; proportional $1/\sqrt{f}$. OUTPUT, max: 0.5 W.

Mechanical: WEIGHT: 1.3 lb (0.6 kg) net.



SWR introduced into line



Description	Catalog Number
874-GAL 50- Ω Adjustable Attenuator	0874-9577

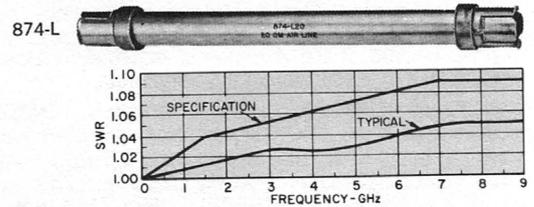
GR874[®] 50-Ohm Air Lines

Fixed Air Lines

For use as spacing interconnecting elements of a coaxial system, as time-delay elements, and as absolute impedance references in time-domain reflectometry. Each air line consists of a length of 50- Ω , air-dielectric coaxial line with a GR874 connector at each end.

Frequency: Dc to 7 GHz; to 9 GHz if connectors are locked.
Electrical: IMPEDANCE: 50 Ω ; \pm 0.4%. INPUT VOLTAGE: Up to 1500 V pk. POWER, average into 50- Ω load: Up to 40 kW, dc to 50 kHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 10 GHz.

Length:	ELECTRICAL	DELAY TIME
874-L10L	10.086 \pm 0.06 cm	0.3366 \pm 0.0018 ns
874-L20L	20.096 \pm 0.06 cm	0.6706 \pm 0.0018 ns
874-L30L	30.111 \pm 0.06 cm	1.0047 \pm 0.0018 ns



Description	Catalog Number
50-Ω Fixed Rigid Air Lines	
874-L10L, 10 cm, locking GR874 connectors	0874-9605
874-L20L, 20 cm, locking GR874 connectors	0874-9609
874-L30L, 30 cm, locking GR874 connectors	0874-9613

Constant-Impedance Adjustable Air Lines

Line stretchers with a very low SWR and a uniform characteristic impedance of 50 Ω . Especially useful for eliminating the usual Smith-chart corrections for length of line between unknown and impedance-measuring device. Also useful as impedance-matching transformers and phase-adjustment elements in coaxial systems. Most useful at frequencies above that for which the length of adjustment is a half wavelength.

Frequency: Dc to 7 GHz.

	874-LK10L	874-LK20L
Length of Adjustment	10 cm	22 cm
HALF WAVELENGTH	at 1.5 GHz	at 680 MHz
SWR	< 1.03 at 500 MHz, < 1.06 at 1 GHz, < 1.08 at 1.5 GHz, < 1.10 at 2 GHz	< 1.15 at 3 GHz, < 1.2 at 4 GHz, < 1.25 at 5 GHz

Electrical: IMPEDANCE: 50 Ω . INPUT VOLTAGE: Up to 1500 V pk. POWER, average into 50- Ω load: Up to 40 kW, dc to 30 kHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 5 GHz.
Mechanical: LENGTH (min): -LK10L, 14 in. (35 cm); -LK20L, 23 in. (58 cm).



Description	Catalog Number
50-Ω Constant-Impedance Adjustable Air Lines	
874-LK10L, 10 cm, locking GR874 connectors	0874-9627
874-LK20L, 20 cm, locking GR874 connectors	0874-9631

Trombone Constant-Impedance Adjustable Air Line

Used to vary the length of a 50- Ω transmission line between two fixed terminals without moving the terminals or using flexible cables. Consists of two 874-LK20L Adjustable Lines joined at one end by a U-shaped section to form a rigid assembly. Can be plugged into two adjacent GR874 coaxial connectors or inserted in a line by means of two ells (not included) and installed vertically to save bench space. Low SWR. An excellent phase shifter and variable delay line.

Frequency: Dc to 2 GHz (874-LK10L recommended above 2 GHz).

Length of Adjustment, electrical: 44 cm (half wavelength at 340 MHz).

SWR: < 1.10 to 1 GHz, < 1.25 to 2 GHz.

Electrical: IMPEDANCE: 50 Ω .

Mechanical: LENGTH: 24 to 33 in. (61 to 83 cm). SPACING between centers: 1.1875 in. (30 mm). WEIGHT: 2.5 lb (1.2 kg) net.



Description	Catalog Number
50-Ω Trombone Constant-Impedance Adjustable Air Line	
874-LTL, 44 cm, locking GR874 connectors	0874-9645

GR874[®] 50-Ohm Coupling Elements

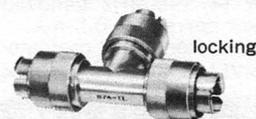
Tee

For connecting stubs and other elements in shunt with a coaxial line.

Electrical: IMPEDANCE: 50 Ω , nominal. INPUT VOLTAGE: Up to 1500 V pk. POWER, average into 50- Ω load: Up to 40 kW, dc to 50 kHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 10 GHz.

Mechanical: DIMENSIONS: 3.38 in. (86 mm) long x 2.25 in. (57 mm) wide. WEIGHT: 0.4 lb (0.2 kg) net.

National stock numbers are listed at the back of the catalog.



Description	Catalog Number
50-Ω Tees	
874-T, non-locking GR874 connectors	0874-9910
874-TL, locking GR874 connectors	0874-9911

Low-Pass Filters

Recommended for use in immittance- or voltage-measuring systems to reduce harmonics, and especially in systems that contain nonlinear elements or sections that might resonate at a harmonic. Also useful in slotted-line measurements. Uses Chebyshev-type filters that produce a very steep cutoff characteristic at the expense of passband flatness. Spurious responses in the stopband are very small.

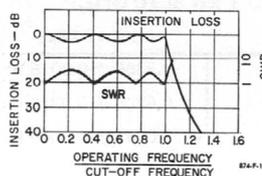
Electrical: IMPEDANCE: 50 Ω , nominal. INPUT VOLTAGE: Up to 200 V pk. POWER, average into 50- Ω load; Up to 0.8 kW, dc to 20 MHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 1 GHz.
Mechanical: LENGTH: -F500L, 10.19 in. (259 mm); -F1000L, 7.13 in. (181 mm); -F2000L, 4.38 in. (111 mm).

Description	Catalog Number
50-Ω Low-Pass Filters	
874-F500L, 500 MHz, locking GR874 connectors	0874-9537
874-F1000L, 1 GHz, locking GR874 connectors	0874-9541
874-F2000L, 2 GHz, locking GR874 connectors	0874-9545

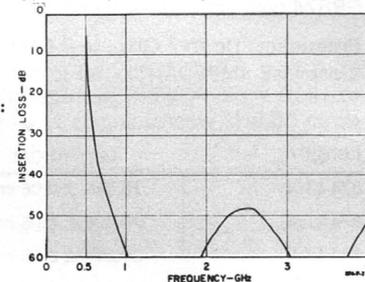


874-F2000L

Typical insertion loss and SWR:



Typical stop-band response of 874-F500L.



Power Dividers

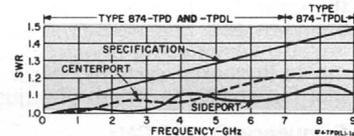
A coaxial tee with a 16.67- Ω resistor in each leg, connected so the tee is matched at any port when the other two ports are terminated in 50- Ω loads. The match holds throughout the wide frequency range. There is 0° phase difference between the outputs. The use of stable deposited-carbon-film resistors and the linear SWR-frequency relationship make these power dividers particularly valuable for pulse work and in network-analyzer applications.

Frequency: Dc to 7 GHz; to 9 GHz if connectors are locked.
Power Division: Equal within 0.3 dB when symmetrically fed.
Electrical: IMPEDANCE: 50 Ω , nominal. INSERTION LOSS: 6 dB (+2, -0.5 dB), input to each output. INPUT POWER: 2 W max continuous.

Mechanical: DIMENSIONS: 4 in. (102 mm) long x 2.38 in. (50 mm) wide.



locking



Description	Catalog Number
50-Ω Power Dividers	
874-TPD, non-locking GR874 connectors	0874-9912
874-TPDL, locking GR874 connectors	0874-9913

90° Ells

Convenient right-angle line section.
SWR: <1.06 at 2 GHz, <1.15 at 4 GHz.
Electrical: IMPEDANCE: 50 Ω , nominal. ELECTRICAL LENGTH: \approx 7 cm. INPUT VOLTAGE: Up to 1500 V pk. POWER, average into 50- Ω load: Up to 40 kW, dc to 50 kHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 10 GHz.
Mechanical: DIMENSIONS: 2.25 in. (57 mm) long x 2.25 in. (57 mm) wide.



locking

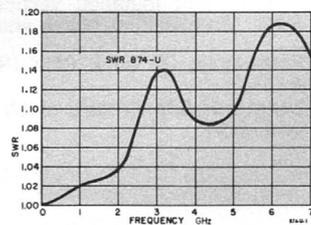
50-Ω 90° Ells	
874-EL, non-locking GR874 connectors	0874-9526
874-EL-L, locking GR874 connectors	0874-9527

U-Line Section

A coaxial line section in the shape of a U that is useful in many coaxial setups.

Frequency: Dc to 7 GHz.
Electrical: IMPEDANCE: 50 Ω , nominal.
Mechanical: DIMENSIONS (wxhxd): 2.25x2x0.88 in. (57x51x22 mm). WEIGHT: 0.5 lb (0.3 kg) net.

874-U, U-Line Section, non-locking GR874 connectors	0874-9528
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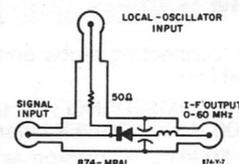
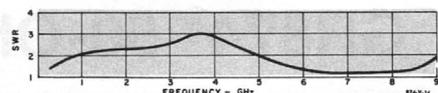


Mixer

A broadband mixer of improved design for use in general applications. It offers wider frequency range, lower SWR, lower-leakage connectors; it requires less local-oscillator power.

Frequency: 10 MHz to 9 GHz. MAX I-F: 60 MHz.
Sensitivity: <6 μ V, typical, input behind 50 Ω will increase output of i-f amplifier (30-MHz i-f, 0.5-MHz bandwidth, 2-dB noise figure) by 3 dB, for mixer current of 0.5 mA.
Input: < 6 mW typically required from local oscillator for 0.2-mA rectified current (signal and L-O source impedances, each 50 Ω).
Electrical: IMPEDANCE: 50 Ω , input; 400 Ω avg//7 pF, output. DIODE: 1N23C.
Mechanical: DIMENSIONS: 4.63 in. (117 mm) long x 2.5 in. (64 mm) wide. WEIGHT: 0.5 lb (0.3 kg) net.

Typical SWR (mixer current = 0.5 mA):



874-MRAL Mixer, locking GR874 connectors	0874-9947
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National stock numbers are listed at the back of the catalog.

Mixer Rectifiers

A broadband rf mixer for use as a heterodyne detector with an i-f amplifier.

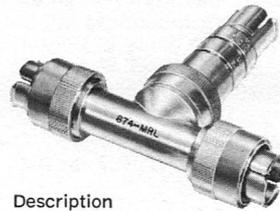
Frequency: 40 MHz to 5 GHz, less sensitive at lower and higher frequencies. MAX I-F: 30 MHz.

Sensitivity: $< 5\mu\text{V}$ typical (equivalent to $\approx 10\mu\text{V}$ behind 50 Ω to increase output of i-f amplifier by 3 dB).

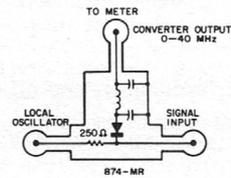
Input: 2 V max required from local oscillator.

Electrical: IMPEDANCE: 50- Ω input, \approx 400- Ω output. DIODE: 1N21B.

Mechanical: DIMENSIONS: 3.75 in. (95 mm) long x 3.5 in. (89 mm) wide.



locking



Description

Catalog Number

50- Ω Mixer Rectifiers
874-MRL, locking GR874 connectors

0874-9945

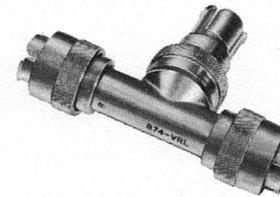
Voltmeter Rectifiers

Used to monitor the voltage in a coaxial system. Similar to 874-VQ but includes a 50- Ω resistor in series with the output-port center conductor. In combination with a signal source and a properly calibrated indicator, it can simulate a 50- Ω generator with known open-circuit voltage and thus be used in an oscillator amplitude-regulating system.

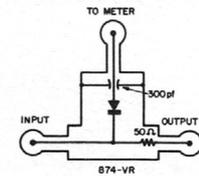
Frequency: 15 MHz to 2.5 GHz when used as a calibrated voltmeter.

Electrical: IMPEDANCE: 50 Ω nominal. INPUT VOLTAGE: 2 V max. BYPASS CAPACITANCE: \approx 300 pF. DIODE: 1N23B.

Mechanical: DIMENSIONS: 3.75 in. (95 mm) long x 2.5 in. (64 mm) wide. WEIGHT: 0.4 lb (0.2 kg) net.



locking



50- Ω Voltmeter Rectifiers
874-VRL, locking GR874 connectors

0874-9943

Voltmeter Detectors

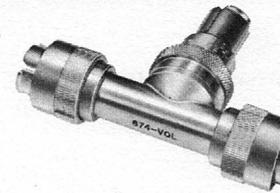
For use as a general-purpose rf-level detector with a dc indicator or as a modulated-signal detector with a sensitive amplifier. It can be inserted into a 50- Ω line without introducing appreciable discontinuity or, with a GR874 50- Ω termination, it can be used as a matched detector to terminate a line.

Frequency: 500 kHz to 2 GHz when used as a matched detector.

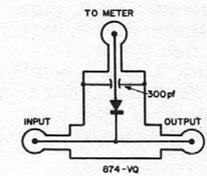
SWR: < 1.1 at 1 GHz, < 1.2 at 2 GHz.

Electrical: IMPEDANCE: 50 Ω , nominal. INPUT VOLTAGE: 2 V max. BYPASS CAPACITANCE: \approx 300 pF. DIODE: 1N23B.

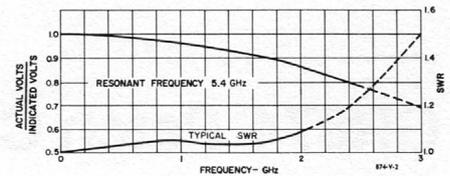
Mechanical: DIMENSIONS: 3.75 in. (95 mm) long x 2.5 in. (64 mm) wide. WEIGHT: 0.4 lb (0.2 kg) net.



locking



Typical SWR and correction factor.



Description

Catalog Number

50- Ω Voltmeter Detectors
874-VQL, locking GR874 connectors

0874-9941

Coupling Capacitors

A short length of coaxial line with a disk capacitor in series with the inner conductor. High frequencies are transmitted with small reflections, but dc and low audio frequencies are blocked.

Frequency: To 4 GHz.

Capacitance: 4700 pF, $-20 + 50\%$, series.

SWR: < 1.06 at 1 GHz, < 1.15 at 2 GHz, < 1.3 from 2 to 4 GHz.

Electrical: IMPEDANCE: 50 Ω , nominal. INPUT VOLTAGE: Up to 500 V pk. POWER, average into 50- Ω load: Up to 5 kW up to 500 kHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 1 GHz.

Mechanical: LENGTH: 3 in. (76 mm).



non-locking

50- Ω Coupling Capacitors
874-K, non-locking GR874 connectors

0874-9596

Insertion Unit

Small components, pads, vhf transformers, filters, or other networks mounted within the 2-inch long, 9/16-inch diameter space can be conveniently inserted into a 50- Ω coaxial system with minimum leakage and discontinuity.

Electrical: IMPEDANCE: 50 Ω , nominal.

Mechanical: LENGTH: 4.38 in. (111 mm).



874-X Insertion Unit, non-locking GR874 connectors

0874-9990

Coupling Probe

Electrostatic probe consisting of a binding post mounted on a GR874 connector. (Note: A pair of posts is also available, the 874-Q2 Adaptor.)

Electrical: IMPEDANCE: 50 Ω , nominal.

Mechanical: LENGTH: 2.08 in. (53 mm).



874-MB Coupling Probe, non-locking GR874 connector

0874-9666

National stock numbers are listed at the back of the catalog.

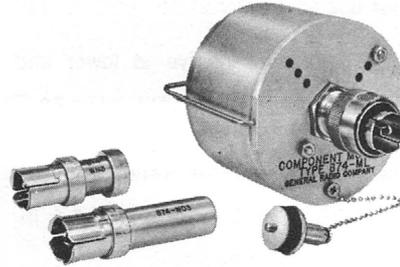
Component Mount

A shielded enclosure for convenient mounting of small components to be measured. Use of mount minimizes stray-capacitance variation in impedance measurements of circuit elements. Includes two accessories, an 874-WN3 Short-Circuit Termination and an 874-WO3 Open-Circuit Termination.

Frequency: Dc to 5 GHz.

Electrical: IMPEDANCE: 50 Ω , nominal.

Mechanical: DIAMETER: 3 in. (76 mm). WEIGHT: 0.7 lb (0.4 kg) net.



Description	Catalog Number
874-ML Component Mount, locking GR874 connector	0874-9663

Bias Insertion Unit

Used with slotted lines and the GR 1602-B Admittance Meter for immittance and similar measurements where bias is to be applied to diodes, transistors, and other solid-state devices. It comprises a blocking capacitor in series with the line, an isolating choke, and a low-pass filter.

In slotted-line measurements it is inserted at the source end of the line and therefore introduces no reflections at the measurement terminals.

Dc Current: 2.5 A, max.

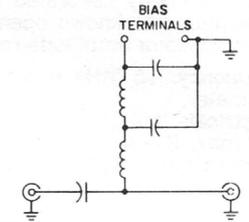
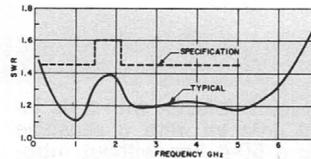
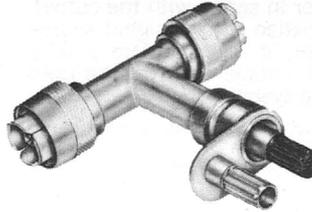
Dc Voltage: 400 V, max.

SWR: See curve.

Insertion Loss: Typically, <1.7 dB from 300 MHz to 3 GHz, <0.8 dB from 3 GHz to 5 GHz.

Dimensions: 4 $\frac{3}{8}$ x 3 $\frac{3}{8}$ in. (115 x 99 mm).

Net Weight: 6 $\frac{1}{2}$ oz. (185 g).



Schematic Diagram of 874-FBL

Description	Catalog Number
Bias Insertion Unit 874-FBL	0874-9759

GR874[®] Patch Cords

50-, 72-, and 75-Ohm Coaxial Patch Cords



874-R20A



874-R22LA



874-R34



874-R33

874-R20 and -R22 These cords (50 Ω or 75 Ω) feature low SWR to 9 GHz and convenient GR874 connectors at each end.

874-R33 This cord (72 Ω) terminates in a pair of banana plugs, one connected to the center conductor and the other to the braid through a 5-in. pigtail. These plugs mate directly with GR 274 and 938 Jacks and 938 Binding Posts. The other end has a GR874 connector.

874-R34 This cord (50 Ω) terminates in a 274-NK Shielded Double Plug. The other end has a GR874 connector.

Electrical Rating: INPUT VOLTAGE: -R20, up to 1000 V pk; -R22, up to 500 V pk. POWER, average into 50- Ω load: -R20, up to 20 kW, dc to 100 kHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 5 GHz; -R22, up to 5 kW, dc to 500 MHz, decreasing as $1/\sqrt{f}$ to 0.1 kW at 1 GHz.

National stock numbers are listed at the back of the catalog.

102 GR874[®] PATCH CORDS

50- Ω Coaxial Patch Cords, 3 ft long

Low-loss RG-214/U cable, GR874 connectors

874-R20A, non-locking

0874-9680

874-R20LA, locking

0874-9681

General-purpose 874-A3 cable, GR874 connectors

874-R22A, non-locking

0874-9682

874-R22LA, locking

0874-9683

General-purpose RG-58C/U cable

874-R34, with shielded double banana plug

0874-9692

72- Ω Coaxial Patch Cord, 3 ft long

Low-capacitance cable

874-R33, with pair of banana plugs

0874-9690

75- Ω Coaxial Patch Cord, 3 ft long

Low-loss cable, GR874 75- Ω connectors

874-R20 (75 Ω)

0874-9757

General-purpose cable, GR874 75 Ω connectors

874-R22 (75 Ω)

0874-9758