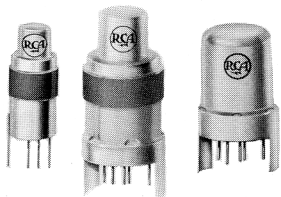


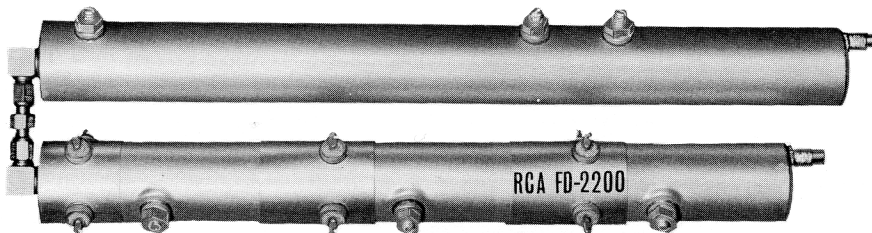
RCA

muvistors

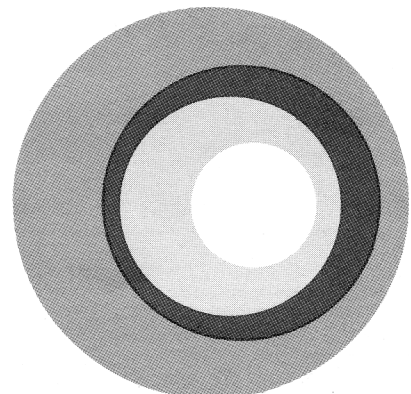
Reference Guide to
Commercial and Developmental Types



Single- and Double-Ended Types



Integral-Cavity Amplifiers



RADIO CORPORATION OF AMERICA
ELECTRONIC COMPONENTS AND DEVICES
HARRISON,
N. J.

Trademark(s) ® Registered
Marcas(s) Registrada(s)

NUVISTOR-TUBE SOCKET & CONNECTOR INFORMATION^a

NUVISTOR TYPE	SOCKET			
	Mounting	Body Material ^b	Cinch Mfg. Co. ^c No.	Cinch-Jones Sales-Division ^d Distributor No.
2CW4 7586	Crimp	MFP	133 65 10 001	5NS
2DS4 7587		DIALL [▲]	133 65 92 025	-
6CW4 7895		TEFLON	133 65 91 034	-
6DS4 8056	Flange	MFP	133 65 10 003	5NS-1
13CW4 8393	Printed-Board (Stand-Off)	MFP	133 65 10 009	5NS-2
8058 8203 8627	Crimp	MFP	133 65 10 041	5NS-3
2DV4 6DV4 A15526	Crimp	HALON [□]	133 67 90 040	5NS-4
8628	Crimp	DIALL	133 65 92 025	-
		TEFLON [●]	133 65 91 034	-
A15274B	Swaged	MFP	131 35 10 014	-
A15533	Spring	MFP	131 35 10 014 with Mounting Spring 441 00 23 094	-

NUVISTOR TYPE	TOP-CAP CONNECTOR	
7587 8058 8627	Cinch Mfg. Co. ^c No. 422 03 22 017 or 422 03 22 024, or equivalent "1/4-inch" connector.	
A15274B A15533	International Electronic Research Corp. ^e Part No. TXB2P-019-028G	
A15526	For Distributed-Constant Circuit	International Electronic Research Corp. ^e Therna-Link Retainer Part No. TXBE-032-031G
	For Lumped-Constant Circuit	Wakefield Engineering, Inc. ^f Semiconductor Cooler Type NF207

^a Information on sockets or connectors having different materials or finishes may be obtained from the manufacturers listed. Sockets or connectors having comparable mechanical and electrical characteristics may be available from other manufacturers.

^b MFP = general-purpose, low-loss Mica-Filled Phenolic; DIALL = glass-filled Diallyl Phthalate for missile, satellite, and other high-vacuum applications; TEFLON and HALON are for low-rf and low-leakage loss, high-temperature applications.

[▲] TRADE MARK: Mesa Plastics Co., Los Angeles, Calif.

[□] TRADE MARK: Allied Chemical Corp., Morristown, N.J.

^c 1026 South Homan Ave., Chicago, Illinois 60624. Tel: (312) NE 2-2000.

^d This number appears in many distributors' catalogs.

^e 135 West Magnolia Blvd., Burbank, Calif. 91502. Tel: (213) 849-2481.

^f 139 Foundry St., Wakefield, Mass. 01880. Tel: (617) 245-5900

[●] TRADE MARK: E.I. DuPont de Nemours & Co., Inc., Wilmington, Del.

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FIELD OFFICES

EQUIPMENT SALES

East	<i>Newark</i>	32 Green St., Newark, N.J. 07102	(201) 485-3900
	<i>Syracuse</i>	731 James St., Room 402, Syracuse, N.Y. 13203	(315) 474-5591
	<i>Needham</i>	64 "A" St., Needham Heights, Mass. 02194	(617) 444-7200
Mid-Atlantic	<i>Haddonfield</i>	605 Marlton Pike, Haddonfield, N.J. 08034	(609) 428-4802
	<i>Orlando</i>	200 East Marks St., Orlando, Fla. 32803	(305) 425-5563
Central	<i>Chicago</i>	446 East Howard Ave., Des Plaines, Ill. 60018	(312) 827-0033
	<i>Detroit</i>	714 New Center Bldg., Detroit, Mich. 48202	(313) 875-5600
	<i>Minneapolis</i>	5805 Excelsior Blvd., Minneapolis, Minn. 55416	(612) 929-0676
Mid-Central	<i>Indianapolis</i>	2511 East 46th St., Bldg. Q2, Atkinson Square, Indianapolis, Ind. 46205	(317) 546-4001
West	<i>Hollywood</i>	6363 Sunset Blvd., Hollywood, Calif. 90028	(213) 461-9171
	<i>Los Altos</i>	4546 El Camino Real, Suite P, Los Altos, Calif. 94022	(415) 948-8996
	<i>Seattle</i>	2250 First Ave. South, Seattle, Wash. 98104	(206) MAIN 2-8816

GOVERNMENT SALES

<i>Harrison</i>	415 South Fifth St., Harrison, N.J. 07029	(201) 485-3900
<i>Dayton</i>	224 North Wilkinson St., Dayton, Ohio 45402	(513) 461-5420
<i>Washington</i>	1725 "K" St., N.W., Washington, D.C. 20006	(202) 337-8500

NUVISTOR-TUBE RELIABILITY

Production Tests (At Max.-Rated P_b)

Based on over 1,662,000 tube-hours of regular-production life tests, nuvistor type 7586 has had an observed Failure Rate of 0.54% per 1000 hours during the first 5000 hours of operation at maximum-rated plate-dissipation conditions ($E_f = 6.3$ volts, $E_b = 100$ volts, $E_c = -1.85$ volts, $R_g = 0.5$ megohm, $E_{hk} = 100$ volts, $P_b = 1$ watt and $T_E = 150^\circ\text{C min.}$)

Engineering-Evaluation Tests (At Reduced P_b)

Based on over 1,541,000 tube-hours of engineering-evaluation life tests, nuvistor type 7586 has had an observed Failure Rate of 0.065% per 1000 hours, out to 20,000 hours of operation at reduced plate-dissipation (normal-operation) conditions ($E_f = 6.3$ volts, $E_{bb} = 75$ volts, $R_k = 100$ ohms, $R_g = 0.5$ megohm, $P_b = 0.75$ watt, and $T_E = 150^\circ\text{C min.}$)

UNIFORMITY OF NUVISTOR-TUBE CHARACTERISTICS

The critical characteristics of RCA nuvistor tubes have an extremely high degree of uniformity from tube to tube, both initially and throughout life when compared to conventional electron tubes. This exceptional uniformity results from the unique nuvistor-tube design, the special methods of assembly and processing, and a rigorous Quality-Assurance Program. Industrial and Military types are subjected, on a statistical-lot-sampling basis, to Initial Variables Controls to assure that the spread of critical characteristics is narrow and that the sample average is close to the established bogey value. In addition, Life-Test end-points assure that (1) the Transconductance Change with Operating Time for an individual sample tube and the Sample Average of these individual changes, are small and (2) the Useful Power Output for class C types is above an established minimum value.

NUVISTOR TUBES and NUCLEAR RADIATION

Pulse Nuclear Irradiation

Nuvistor tubes have been operated as af-amplifier tubes and monitored before, during, and after exposure to pulse nuclear radiation having a Peak Fast-Neutron Flux of 10^{15} neutrons per square centimeter per second and a Peak Gamma Intensity of 10^7 roentgens per second.

The transient response of all tubes monitored followed the nuclear-radiation pulse and returned to normal, with no permanent damage to the tubes.

Steady-State Nuclear Irradiation

Type 7586 nuvistor tubes have been operated, for 3 hours, in a nuclear-radiation environment having a constant Fast-Neutron Flux of 10^{13} neutrons per square centimeter per second and a Gamma Intensity of 10^8 roentgens per second.

During the 3-hour exposure to nuclear radiation, the tubes continued to operate with no permanent damage.

ADDITIONAL TECHNICAL INFORMATION

Additional technical information on the RCA Nuvistor Tubes and Integral-Cavity TRF Amplifiers listed in this abbreviated Reference Guide is available, in the following forms, from your nearest RCA Field Office, or from Commercial Engineering, Electronic Components and Devices, RCA, Harrison, New Jersey 07029.

Technical Bulletins

For each commercial type.

Preliminary and Tentative Data Sheets

For each developmental type.

Brochure

1CE-280 RCA Nuvistor Tubes for Industrial and Military Applications.

Application Notes

AN-191 RCA-6CW4 and 2CW4 Nuvistor Triodes as RF Amplifiers in VHF Television Tuners.

AN-193 Use of RCA-7587 Industrial Nuvistor Tetrode in RF and IF Applications.

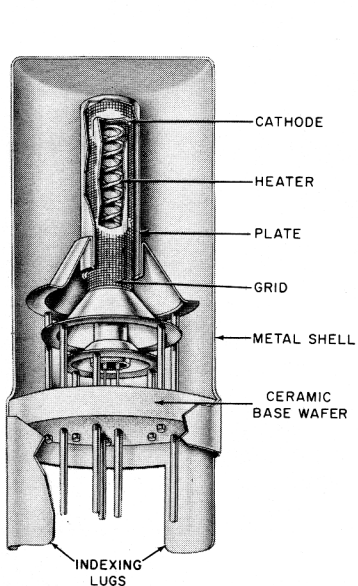
AN-195 Noise and Gain of the RCA-8056 Nuvistor Triode at 200 Mc.

AN-196 Temperature Ratings and Thermal Considerations for Nuvistor Tubes.

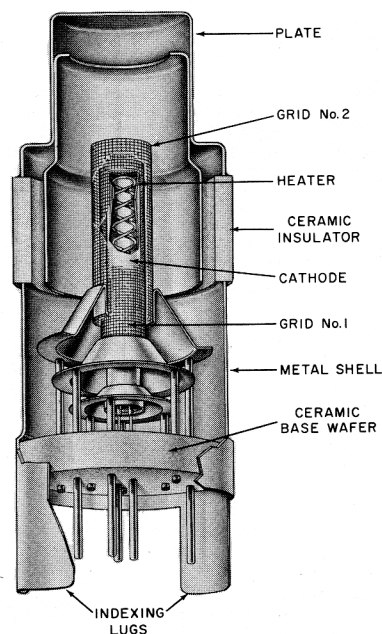
Preliminary and Tentative Application-Information Reports

ST-2296 Nuvistor Nuclear-Radiation Testing.

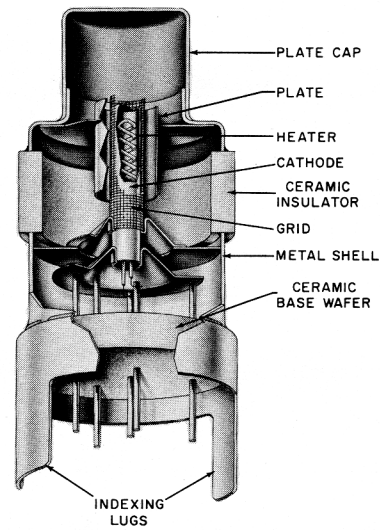
ST-2474 Nuvistor Environmental Performance.



Typical Single-Ended
Nuvistor Triode



Typical Double-Ended
Nuvistor Tetrode



Typical Double-Ended
Nuvistor Triode