RAYTHEON

INDUSTRIAL TUBES

voltage regulator tubes

voltage reference tubes

radiation counter tubes

special purpose tubes

pencil tubes

low power transmitting tubes

RAYTHEON

VOLTAGE REGULATOR-VOLTAGE REFERENCE TUBES

TYPE	TYPICAL APPLICATION	MAX. DIMENSIONS Inches		MIN. STARTING VOLTAGE SUPPLY IN LIGHT	OPERATING VOLTAGE Approx.	MIN. OPERATING CURRENT ma.	MAX. OPERATING CURRENT ma.	MAX. REGULATION Volts	TYPE
		Height	Diam.						
0A2	Voltage Regulator	2 5/8	3/4	185	150	5	30	6	0A2
0A2WA	Voltage Regulator	2 5/8	3/4	165	150	5	30	5	0A2WA
0A3/VR75	Voltage Regulator	4 1/8	1 9/16	105	75	5	40	6.5	0A3/VR75
0B2	Voltage Regulator	2 5/8	3/4	133	108	5	30	3.5	0B2
0C2	Voltage Regulator	2 5/8	3/4	115	75	5	30	4.5	0C2
0B2WA	Voltage Regulator	2 5/8	3/4	133	108	5	30	3.0	0B2WA
0B3/VR90	Voltage Regulator	4 1/8	1 9/16	130	90	5	30	6	0B3/VR90
0C3/VR105	Voltage Regulator	4 1/8	1 9/16	133	105	5	40	4	0C3/VR105
0D3/VR150	Voltage Regulator	4 1/8	1 9/16	185	150	5	40	5.5	0D3/VR150
CK1022	Voltage Regulator	2 1 1/16	3/4	1100	1000	0.005	0.055	20	CK1022
CK1038	Voltage Regulator	1 5/8	0.400	930	900	0.005	0.055	15	CK1038
CK5651	Voltage Reference	2 1/8	3/4	115	82-92	1.5	3.5	3	CK5651
CK5651WA	Voltage Reference	2 1/8	3/4	115	82-88	1.5	3.5	2	CK5651WA
CK5783	Voltage Reference	1 1/2	0.400	115	82-92	1.5	3.5	3	CK5783
CK5783WA CK5783WB	Voltage Reference	1 1/2	0.400	115	83-89	1.5	3.5	3	CK5783WA CK5783WB
CK5787	Voltage Regulator	2 1/16	0.400	145	95-103	5	25	5	CK5787
CK5787WA CK5787WB	Voltage Regulator	2 1/16	0.400	141	95-103	5	25	3	CK5787WA CK5787WB
CK5962	Voltage Regulator	2 1 1/16	3/4	750	700	0.002	0.055	15	CK5962
CK6073	Voltage Regulator	2 5/8	3/4	185	150	5	30	6	CK6073
CK6074	Voltage Regulator	2 5/8	3/4	133	108	5	30	4	CK6074
CK6213	Voltage Reference	1 3/8	0.400	200	127-133	1	2.5	2	CK6213
CK6437	Voltage Regulator	1 5/8	0.400	800	700	0.005	0.100	15	CK6437
CK6438	Voltage Regulator	1 5/8	0.400	1400	1200	0.005	0.100	20	CK6438
CK6542	Voltage Regulator	2 1/8	0.400	185	150	5	25	6	CK6542
CK6626/0A2WA	Voltage Regulator	2 5/8	3/4	165	150	5	40	5	CK6626/0A2WA
CK6627/0B2WA	Voltage Regulator	2 5/8	3/4	133	108	5	30	3.0	CK6627/0B2WA

RADIATION COUNTER (GEIGER-MUELLER) TUBES

(All glass, self-quenching)

TYPE	MAX. DIMENSIONS Inches		TERMINAL CONN.	OPERATING VOLTAGE Volts DC	PLATEAU LENGTH (minimum) Volts DC	RELATIVE PLATEAU SLOPE (maximum) Per 100V	GEIGER THRESHOLD Volts DC max.	TYPICAL BACKGRND Unshielded counts/min.	AMBIENT TEMPERATURE RANGE °C	WALL HEIGHT Nominal mg/sq. cm.	EFFICIENCY %	LIFE counts	TYPE
	Length	Diam.											
CK1018	8.25	0.81	8HA	925	150	3%	850	60	−40 to +55	35	90	10^8	CK1018
CK1019	8.25	0.81	8HA	970	150	3%	880	60	−40 to +55	35	90	10^8	CK1019
CK1020	6.0	0.75	9S	925	150	3%	850	60	−40 to +55	35	90	10^8	CK1020
CK1021	5.25	0.66	9S	925	150	3%	850	60	−40 to +55	35	90	10^8	CK1021
CK1023	5.0	0.75	5DB	925	150	3%	850	60	−40 to +55	35	90	10^8	CK1023
CK1026	3.0	0.75	8HB	900	150	20%	760	60	−50 to +55	175		$>10^{10}$	CK1026
CK1049	5.75	0.75	8HB	900	150	20%	760	150	−50 to +55	35		$>10^{10}$	CK1049

SPECIAL PURPOSE TUBES

TYPE	CONSTRUCTION	TYPICAL APPLICATION	HTR or FILAMENT			MAX. DIMENSIONS Inches		PLATE VOLTS	GRID 1 VOLTS	GRID 2 VOLTS	GRID 3 VOLTS	PLATE CURR. ma.	GRID 2 CURR. ma.	AMP. FACT.	PLATE RESIST. meg.	MUT. COND. μmhos	OUT-PUT watts	LOAD. RESIST. ohms	TYPE
			Volts	Amps.	Type	Height	Diam.												
1AE4	Pentode	R-F Amplifier	1.25	0.1	Fil	2 1/8	3/4	90	0	90		3.5	1.2		0.5	1550			1AE4
3A4	Pentode	RF-AF Pwr. Amp.	1.4 2.8	0.2 0.1	Fil	2 1/8	3/4	150	−8.4	90		13.3	2.2		0.1	1900	0.7	8000	3A4
3A5	Dble. Triode	AF-RF Amp. Osc.	2.8 1.4	0.11 0.22	Fil	2 1/8	3/4	90	−2.5			3.7		15		1800	(Each Unit)		3A5
3B4	Beam Pentode	RF Amp. Osc.	2.5	0.165	Fil	2 1/8	3/4	90	Rg= 45K	90		15	4.8	(IC_1 = 0.55 ma)			0.8 (at 100 Mc)		3B4
6AJ5	Pentode	RF-AF Amplifier	6.3	0.175	Htr	1 3/4	3/4	28	Rk200	28		3	1.2		0.090	2750			6AJ5
6AN5	Pentode	RF-AF Pwr. Amp.	6.3	0.45	Htr	2 1/8	3/4	120	Rk120	120		35	12		0.0125	8000	1.3	2500	6AN5
6AR6	Pentode	Power Amp.	6.3	1.2	Htr	3 15/32	1 7/16	250	−22.5	250		75	5.0		0.021	5400			6AR6
6AS6	Pentode	Mixer-Gated Amp.	6.3	0.175	Htr	1 3/4	3/4	120	−2	120	0	5.2	3.5			3200			6AS6
6AS7G	Dble. Triode	DC Amplifier	6.3	2.5	Htr	5 5/16	2 1/16	135	Rk250			125		2.1		7500			6AS7G
6J4	Triode	UHF Amplifier	6.3	0.4	Htr	2 1/8	3/4	150	Rk100			15.0		55		12000			6J4
7AK7	Pentode	Mixer-Gated Amp.	6.3	0.8	Htr	3 3/32	1 3/16	150	0	90	0	40	21		0.0115	6500			7AK7
954	Pentode	UHF Amplifier	6.3	0.15	Htr	1 7/8	1 5/32	250	−3	100		2	0.7		>1	1400			954
955	Triode	UHF Oscillator	6.3	0.15	Htr	1 3/8	1 5/32	250	−7			6.3		25		2200			955
956	Pentode	UHF Amplifier	6.3	0.15	Htr	1 7/8	1 5/32	250	−3	100		6.7	2.7		0.7	1800			956
957	Triode	UHF Oscillator	1.25	0.05	Fil	1 3/8	1 5/32	135	−5			2		13.5		650			957
12AY7	Dbl. Triode	Audio Amp.	6.3 12.6	0.3 0.15	Htr	2 3/16	7/8	250	−4			3		44		1750			12AY7
CK1030	Spark Gap	Overvolt. Protect.				1 5/16	5/8	Breakdown Voltage = 1500 to 2000 volts; Min. External Imped. = 5000 ohms.											CK1030
CK1031	Spark Gap	Overvolt. Protect.				1 5/16	5/8	Breakdown Voltage = 3000 to 3500 volts; Min. External Imped. = 10,000 ohms.											CK1031
CK1033	Spark Gap	Overvolt. Protect.				1 5/16	5/8	Breakdown Voltage = 4200 to 4600 volts; Min. External Imped. = 10,000 ohms.											CK1033
CK1050	Gas Triode	Light Indicator	1.25	.280	Fil	1.25	.315	65	−4.5	Indicator for Use in Computer Service									CK1050
CK5656	Dble. Tetrode	R-F Power Amp.	6.3	0.4	Htr	2 3/16	7/8	150	−2	120		15	2.7		0.06	5800	(Each Unit)		CK5656
CK5687	Dble. Triode	Voltage Amp.	6.3 12.6	0.90 0.45	Htr	2 3/16	7/8	250 120	−12.5 −2			12.5 36		16.5 18.5		5500 11000	(Each Unit)		CK5687
CK5691	Dble. Triode	Amplifier	6.3	.600	Htr	2 7/8	1 9/32	250	−2.0			2.3		70	0.044	1600			CK5691
CK5692	Dble. Triode	Amplifier	6.3	.600	Htr	2 7/8	1 9/32	250	−9.0			6.5		20	0.009	2200			CK5692
CK5693	Pentode	Amplifier	6.3	.300	Htr	2 5/8	1 5/16	250	−3.0	100	0	3.0	0.85			1650			CK5693
CK5755	Dble. Triode	DC Amplifier	6.3 12.6	0.36 0.18	Htr	2 3/16	7/8	110	−0.95			0.15		70		500	(Each Unit)		CK5755
CK5842	Triode	Amplifier	6.3	0.3	Htr	1 3/4	7/8	150				25		43		25,000			CK5842
CK5847	Pentode	RF-IF Amp.	6.3	0.3	Htr	1 3/4	7/8	150		150		13.5	40		0.2	13,000			CK5847
CK5881	Pentode	Power Amplifier	6.3	0.90	Htr	3 15/32	1 7/16	250	−14	250		75.0	4.3		0.30	6100	6.7	2500	CK5881
CK5965	Dble. Triode	On-Off Computer Circuits	12.6 6.3	.225 .450	Htr	2 3/16	7/8	150	Rk220			8.2		47	0.007	6500			CK5965
CK6080	Dble. Triode	Series Regulator	6.3	2.5	Htr	4 1/4	1 23/32	135	Rk250			12.5		2	28	7000			CK6080
CK6136	Pentode	RF Amplifier	6.3	.300	Htr	2 1/8	3/4	250	Rk68	150	0	10.6	4.3		1.0	5200			CK6136
CK6201	Dble. Triode	Amplifier	12.6 6.3	.150 .300	Htr	2 3/16	7/8	250	Rk200			10		60	.01	5500			CK6201
CK6225	Pentode	RF Amplifier	6.3	.175	Htr	2 1/8	3/4	250	Rk100	150	0	7.4	2.9		1.0	4600			CK6225
CK6336A	Triode	Power Amp.	6.3	0.15	Htr	4 3/4	2.07	190	Rk200					2.7		13,500			CK336A
CK6414	Dble. Triode	On-Off Control	6.3 12.6	0.3 0.175	Htr	2 5/8	7/8	180	−2.0					42.5		5500			CK6414
CK6485	Pentode	R-F Amplifier	6.3	0.45	Htr	2 1/8	3/4	300	Rk160	150	0	10.0	2.5			9000			CK6485
CK6550	Pentode	Power Amplifier	6.3	1.60	Fil	3 7/8	1 9/16	Max. Plate Voltage = 600; Output 70 watts.											CK6550
9001	Pentode	UHF Amplifier	6.3	0.15	Htr	1 3/4	3/4	250	−3	100		2	0.7		>1	1400			9001
9002	Triode	UHF Oscillator	6.3	0.15	Htr	1 13/16	3/4	250	−7			6.3		25		2200			9002
9003	Pentode	UHF Amplifier	6.3	0.15	Htr	1 3/4	3/4	25	−3	100		6.7	2.7		0.7	1800			9003
9005	Diode	Detector	3.6	0.165	Htr	1 3/8	7/8	Max. Plate Voltage (RMS) = 117v; Max. Io = 1.0 ma.											9005
9006	Dble. Diode	Detector	6.3	0.15	Htr	1 3/4	3/4	Max. Peak Inverse = 750v; Max. Io = 5 ma.											9006

PENCIL TUBES

TYPE	CONSTRUCTION	TYPICAL APPLICATION	HEATER		MAXIMUM DIMENSIONS (Inches)		MAXIMUM RATINGS			CLASS A CHARACTERISTICS			Mutual Cond. μmhos	Ampl. Factor	RF RATINGS MAXIMUM RATINGS-OSC					TYPE
			Volts	Amps.	Hgt.	Diam.	Plate Volts	Plate Curr. (μa)	Plate Diss. watts	Plate Volts	Plate Curr. (ma.)	Cathode Resistor (ohms)			Plate Volts	Plate Current (ma.)	Plate Diss. (watts)	Freq. (mc.)	Oscillator Power output	
CK5675	Triode	RF Oscillator Amplifier	6.3	0.135	2.04	0.82	165	31	5.0*	135	24	68	6400	20	165	31	5.0*	up to 3000	475 mw at 1700 mc	CK5675
CK5876	Triode	RF Oscill.-Ampl. Freq. Mult.	6.3	0.135	2.04	0.82	300	25	6.25*	250	18	75	6500	56	360	25	6.25*	up to 3000	3 watts at 500 mc	CK5876
CK5893	Triode	Plate Pulsed CW Oscill.-Ampl.	6.0	0.330	2.06	0.82	330	35	7.0*	200	25	100	6000	27	PLATE PULSE OSCILLATOR 1750 Peak	3.0 amps Peak	6.0*	3300	1200 watts Peak	CK5893

*If plate dissipation exceeds 2.5 watts, special precautions must be taken to cool anode externally.

TRANSMITTING TUBES

TYPE	CONSTRUCTION	TYPICAL APPLICATION	FILAMENT			MAXIMUM VOLTAGES				MAX. CURRENT MA.			POWER — WATTS			CAPACITANCES			BASE	TYPE
			Volts	Amps.	Type	Plate	Grid 1	Grid 2	Grid 3	Plate	Grid 1	Grid 2	Dissi-pation	Drive	Output	G-P	Input	Output		
2E24	Beam Pentode	VHF Oscil.-Amp.	6.0	0.65	Oxide	600	−175	200		85	3.5	12.5	13.5	2.0	16.5	0.11	8.5	6.5	Octal	2E24
2E26	Beam Pentode	VHF Oscil.-Amp.	6.0	0.8	Cathode	600	−175	200		75	3.5	12.5	13.5	0.17	27	0.20	13	7	Octal	2E26
2E30	Beam Pentode	RF-AF Amplifier	6.0	0.65	Fil	250	−150	250	0	60	3		10	0.2	7.5	0.18	9.6	14	7-Pin Min.	2E30
RK4D22	Beam Tetrode	R-F Oscillator-Amp.	25.2 12.6	0.8 1.6	Cathode	600	−200	350		300	15	35	50	1.5	135	0.27	28.0	13.0	Spec. 7-Pin	RK4D22
RK4D32	Beam Tetrode	R-F Oscillator-Amp.	6.3	3.75	Cathode	600	−200	350		300	15	35	50	1.5	135	0.27	28.0	13.0	Spec. 7-Pin	RK4D32
RK715C	Tetrode	Pulse Modulator	27.0	2.15	Cathode	18000	−1000	1350		15 amp.			60			1.1	38	7	Spec. 4-Pin	RK715C
RK807	Beam Tetrode	R-F Oscil.-Amp.	6.3	0.9	Heater	600	−200	300		100	5	12	30	0.2	50	0.2	11.0	7.0	Med. 5-Pin	RK807
RK811A	Triode	RF-AF Amplifier	6.3	4	Fil	1500	−200			175	50		65	7.1	200	5.6	5.9	0.7	4-Pin	RK811A
RK812A	Triode	RF-AF Amplifier	6.3	4	Fil	1500	−200			175	35		65	6.5	190	5.5	5.4	0.77	4-Pin	RK812A
RK813	Beam Tetrode	R-F Oscil.-Amp.	10.0	5	Thoriated	2250	−300	400		225	30	55	125	4.0	375	0.25	16.3	14	Giant 7-Pin	RK813
RK814	Beam Tetrode	R-F Oscil.-Amp.	10.0	3.25	Thoriated	1250	−300	300		150	15	34	65	1.5	130	0.12	13.0	10.0	Med. 5-Pin	RK814
RK829B	Dual Beam Tetrode	R-F Oscil.-Amp.	12.6	1.125	Cathode	750	−175	225		240*	15*	30*	40*	0.8*	87*	0.12	14.5	7.0	Med. 7-Pin	RK829B
RK832A	Dual Beam Tetrode	R-F Oscil.-Amp.	6.3	0.8	Cathode	750	−100	250		90	6	20	15	0.19	26	0.05	7.5	3.8	Spec. 7-Pin	RK832A
RK833A	Triode	Oscil.-Amp.	10.0	10.0	Fil	4000				0.5 amps.			450	35	1600				Spec.	RK833A
RK837	R-F Pentode	R-F Oscil.-Amp.	12.6	0.7	Heater	500	−200	200	+40	80	8	40	12	0.4	22	0.2	16.0	10.0	Med. 7-Pin	RK837
1614	Beam Pentode	RF-AF Amplifier	6.3	0.9	Heater	375	−125	300		110	5	10	21	0.1	21	0.4	10	12	Octal 7-Pin	1614
RK1625	Beam Tetrode	R-F Oscil.-Amp.	12.6	0.45	Cathode	600	−200	300		100	5	12	30	0.2	40	0.2	11	7	Med. 7-Pin	RK1625
CK5763	Beam Pentode	R-F Oscil.-Amp.	6.0	0.75	Heater	300	−125	250	0	50	5	15	12	0.35	8	0.3	9.5	4.5	9-Pin Min.	CK5763
CK6146	Beam Pentode	RF-AF Amp.	6.3	1.25	Heater	600	−150	250		150	4		25	0.3	69	0.22	13.5	9	Octal	CK6146

*Indicates value for both sections combined.

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RAYTHEON COMPANY Distributor Products Division
411 Providence Turnpike, Westwood, Massachusetts

KIERULFF ELECTRONICS, INC.

820 W. OLYMPIC BLVD.
LOS ANGELES 15, CALIFORNIA
Richmond 8-2444

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