5700

Raytheon

RAYTHEON

MACHLETT

# POWER TUBES

RAYTHEON

MACHLETT

# MODULATORS - OSCILLATORS - AMPLIFIERS - RECTIFIERS

| TYPE | CLASS | CATHODE VOLTS | CATHODE AMPS | AF Mu | MAXIMUM ANODE RATINGS VOLTS | MAXIMUM ANODE RATINGS AMPS | INPUT WATTS | DISS. WATTS | FULL INPUT FREQUENCY MCS | COOLING |
|---|---|---|---|---|---|---|---|---|---|---|
| ML-2C39A | UHF Tri | 6.3 | 1.0 | 100 | 1000 | 0.125‡ | 125 | 100 | 2500 | FORCED AIR |
| ML-2C39WA | UHF Tri | 5.8 | 1.0 | 100 | 1000 | .125‡ | 100 | 100 | 2500 | FORCED AIR |
| ML-2C41 | UHF Tri | 6.3 | 1.03 | 100 | 3500† | 4.0† | 35 | 35 | 3000 | FORCED AIR |
| ML-3CX100A5 | UHF Tri | 6.0 | 1.00 | — | 1000 | .125 | 6 | 100 | 2900 | FORCED AIR |
| ML-102A | H Vac | 20. | 19.0 | ANODE INV PKV 75, PEAK MA 750 | | | | PLATE DISSIPATION 750 WATTS | | CONVECTION |
| ML-141 | H Vac | 5.5 | 6.5 | ANODE INV PKV 125, PEAK MA 750 | | | | PLATE DISSIPATION 100 WATTS | | RADIATION |
| ML-142 | H Vac | 3.8 | 6.6 | ANODE INV PKV 100, PEAK MA 250 | | | | PLATE DISSIPATION 25 WATTS | | CONVECTION |
| ML-148 | H Vac | 5.7 | 6.6 | ANODE INV PKV 150, PEAK MA 1000 | | | | PLATE DISSIPATION 60 WATTS | | CONVECTION |
| ML-199 | H Vac | 12 | 23 | ANODE INV PKV 110, PEAK MA 10000 | | | | PLATE DISSIPATION 1500 WATTS | | CONVECTION |
| ML-212E | Tri | 14 | 6.0 | 16 | 3000 | .350 | — | 275 | 1.5 | RADIATION |
| ML-220C | Tri | 21.5 | 41 | 40 | 15000 | 1.5 | — | 10000 | 4 | WATER |
| ML-220CA | Tri | 21.5 | 41 | 40 | 15000 | 1.5 | — | 5000 | 4 | FORCED AIR |
| ML-222A | Vac | 21.5 | 41 | ANODE INV PKV 25, PEAK AMPS | | | | | | WATER |
| ML-241B | Tri | 14 | 6.0 | 16 | 3000 | .350 | — | 275 | 7.5 | RADIATION |
| ML-242C | Tri | 10. | 3.25 | 12.5 | 1250 | .150 | 188 | 100 | 6 | RADIATION |
| ML-279A | Tri | 10. | 21. | 10 | 3000 | .800 | — | 1200 | 20 | RADIATION |
| ML-298A | Tri | 27 | 225 | 32 | 20000 | 11. | — | 100000 | 4 | WATER |
| ML-322 | UHF-Diode | 6.3 | .95 | ANODE INV PKV .8, PEAK MA 600 | | | | AV PLATE DISSIPATION 15 WATTS | | CONVECTION |
| ML-342A | Tri | 20.0 | 67 | 40 | 20000 | 2.5 | — | 25000 | 4 | WATER |
| ML-342AA | Tri | 20.0 | 67 | 40 | 20000 | 2.5 | — | 5000 | 4 | FORCED AIR |
| ML-343A | Tri | 21.5 | 57.5 | 40 | 18000 | 2. | — | 10000 | 4 | WATER |
| ML-343AA | Tri | 21.5 | 57.5 | 40 | 18000 | 1.5 | — | 5000 | 4 | FORCED AIR |
| ML-354 | Tri | 12.0 | 220. | 25 | 15000 | 12. | 150000 | 75000 | 20 | WATER |
| ML-356/5771 | Tri | 7.5 | 170. | 20 | 12500 | 6.0 | 60000 | 22500 | 25 | WATER |
| ML-357B | Tri | 10.0 | 10. | 30 | 4000 | 0.5 | 1800 | 400 | 100 | RADIATION |
| ML-379A | Tri | 10.0 | 21. | 10 | 3000 | .800 | — | 1200 | 20 | RADIATION |
| ML-857B | HG Vap | 5.0 | 30. | — | 22000 | 20. | — | — | — | CONVECTION |
| ML-869B | HG Vap | 5.0 | 19.0 | — | ANODE INV PKV 20, PEAK AMPS 20 | | | — | — | CONVECTION |
| ML-880 | Tri | 12.6 | 315. | 20 | 10500 | 6.0 | 60000 | 20000 | 25 | WATER |
| ML-889A | Tri | 11.0 | 120. | 21 | 8500 | 2. | 16000 | 5000 | 50 | WATER |
| ML-889RA | Tri | 11.0 | 120. | 21 | 8500 | 2. | 16000 | 5000 | 50 | FORCED AIR |
| ML-891 | Tri | 22.0 | 60. | 8.5 | 12000 | 2.0 | 18000 | 6000 | 1.6 | WATER |
| ML-891R | Tri | 22.0 | 60. | 8.5 | 10000 | 2.0 | 15000 | 4000 | 1.6 | FORCED AIR |
| ML-892 | Tri | 22.0 | 60. | 50 | 15000 | 2.0 | 30000 | 10000 | 1.6 | WATER |
| ML-892R | Tri | 22.0 | 60. | 50 | 12500 | 2.0 | 18000 | 4000 | 1.6 | FORCED AIR |
| ML-893A | Tri | 20.0 | 183. | 34.5 | 20000 | 4.0 | 70000 | 20000 | 5 | WATER |
| ML-893AR | Tri | 20.0 | 183. | 34.5 | 20000 | 4.0 | 70000 | 20000 | 5 | FORCED AIR |
| ML-5530 | Tri | 5.0 | 55 | 26 | 5000 | 1.75 | 8750 | 4000 | 110 | FORCED AIR |
| ML-5530H | Tri | 5.0 | 55 | 26 | 8500 | 1.75 | 10000 | 4000 | 30 | FORCED AIR |
| ML-5531 | Tri | 6.3 | 92 | 24 | 10500 | 3.75 | 30000 | 10000 | 30 | FORCED AIR |
| ML-5541 | Tri | 7.5 | 57 | 26 | 8500 | 2.75 | 23000 | 10000 | 110 | FORCED AIR |
| ML-5575/100 | H Vac | 20.0 | 24 | ANODE INV PKV 150, PEAK MA 1000 | | | | PLATE DISSIPATION 750 WATTS | | CONVECTION |
| ML-5576/200 | H Vac | 20.0 | 32 | ANODE INV PKV 150, PEAK MA 2500 | | | | PLATE DISSIPATION 1000 WATTS | | CONVECTION |
| ML-5604 | Tri | 11.0 | 176 | 19.5 | 12,500 | 3.0 | 32500 | 10000 | 25 | FORCED AIR |

Class Symbols

- Tri : Triode
- Tet : Tetrode
- Pent : Pentode
- PM : Pulse Modulator (Shielded Grid)
- UHF : Ultra High Frequency
- SW : Switch
- H Vac : High Vacuum
- Hg Vap : Mercury Vapor
- IO : Image Orthicon
- Vid : Vidicon
- SD : Storage Display
- D : Display

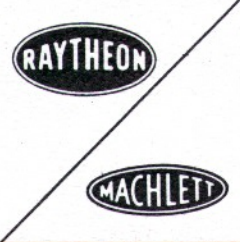
| TYPE | CLASS | CATHODE VOLTS | CATHODE AMPS | AF Mu | MAXIMUM ANODE RATINGS VOLTS | AMPS | INPUT WATTS | DISS. WATTS | FULL INPUT FREQUENCY MCS | COOLING |
|---|---|---|---|---|---|---|---|---|---|---|
| ML-5606 | Tri | 22.0 | 60 | 50 | 14000 | 2.0 | 25000 | 10000 | 1.6 | WATER |
| ML-5619 | Tri | 11.0 | 176 | 19.5 | 12500 | 3.0 | 32500 | 20000 | 25 | WATER |
| ML-5658 | Tri | 12.0 | 310 | 20 | 12500 | 5.0 | 60000 | 20000 | 15 | WATER |
| ML-5666 | Tri | 11.0 | 120 | 21 | 10000 | 2.0 | 20000 | 12500 | 22.5 | WATER |
| [redacted]67 | Tri | 11.0 | 120 | 21 | 10000 | 2.0 | 20000 | 7500 | 22.5 | FORCED AIR |
| [redacted]68 | Tri | 22.0 | 60 | 50 | 14000 | 2.0 | 28000 | 20000 | 5 | WATER |
| ML-5669 | Tri | 22.0 | 60 | 50 | 14000 | 2.0 | 28000 | 10000 | 5 | FORCED AIR |
| ML-5681 | Tri | 12.0 | 220 | 25 | 15000 | 12.0 | 150000 | 75000 | 30 | WATER |
| ML-5682 | Tri | 16.5 | 325 | 30 | 16000 | 20.0 | 300000 | 120000 | 30 | WATER |
| ML-5736 | Tri | 6.0 | 60 | 22 | 5000 | 1.4 | 5000 | 2500 | 60 | FORCED AIR |
| ML-6256 | Tri | 12.6 | 27 | 21 | 5500 | 1.5 | 7000 | 5000 | 110 | WATER |
| ML-6257 | Tri | 12.6 | 27 | 21 | 5500 | 1.5 | 7000 | 5000 | 110 | WATER |
| ML-6258 | Tri | 12.6 | 27 | 21 | 5500 | 1.5 | 7000 | 3000 | 110 | FORCED AIR |
| ML-6420 | Tri | 7.0 | 85 | 20 | 10000 | 2.2 | 20000 | 12500 | 30 | WATER |
| ML-6421 | Tri | 7.0 | 85 | 20 | 10000 | 2.2 | 20000 | 10000 | 30 | FORCED AIR |
| ML-6421F | Tri | 7.0 | 85 | 20 | 10000 | 2.2 | 20000 | 7500 | 30 | FORCED AIR |
| ML-6422 | Tri | 7.0 | 85 | 90 | 12500 | 2.5 | 30000 | 20000 | 30 | WATER |
| ML-6423 | Tri | 7.0 | 85 | 90 | 12500 | 2.5 | 30000 | 12500 | 30 | FORCED AIR |
| ML-6423F | Tri | 7.0 | 85 | 90 | 12500 | 2.5 | 30000 | 10000 | 30 | FORCED AIR |
| ML-6424 | Tri | 7.0 | 120 | 20 | 12500 | 3.5 | 40000 | 20000 | 30 | WATER |
| ML-6425 | Tri | 7.0 | 120 | 20 | 12500 | 3.5 | 40000 | 12500 | 30 | FORCED AIR |
| ML-6425F | Tri | 7.0 | 120 | 20 | 12500 | 3.5 | 40000 | 10000 | 30 | FORCED AIR |
| ML-6426 | Tri | 8.0 | 200 | 20 | 12500 | 8.0 | 80000 | 40000 | 30 | WATER |
| ML-6427 | Tri | 8.0 | 200 | 20 | 12500 | 8.0 | 80000 | 20000 | 30 | FORCED AIR |
| ML-6442 | UHF Tri | 6.3 | 0.9 | 50 | 3000† | 2.5† | 7.5 | 7.5 | 2500 | FORCED AIR |
| ML-6544 | PM Tri | 6.0 | 60 | 90 | HOLD-OVER VOLTAGE 20,000, CURRENT AMPS 75 | | | 1000 | — | FORCED AIR |
| ML-6576 | Tri | 7.5 | 170 | 5.5 | 12000 | 5.0 | 45000 | 22500 | 25 | WATER |
| ML-6623 | Tri | 6.0 | 60 | 22 | 5000 | 1.4 | 5000 | 2500 | 30 | FORCED AIR |
| ML-6696 | Tri | 13.0 | 205 | 20 | 16000 | 11 | 120000 | 60000 | 30 | WATER |
| [redacted]97 | Tri | 13.0 | 205 | 20 | 16000 | 11 | 120000 | 35000 | 30 | FORCED AIR |
| ML-6908 | HV AC | 12.0 | 23 | | ANODE INV PRV 150, PEAK MA 10000, PLATE DISSIPATION 2000 WATTS | | | | | {RADIATION / CONVECTION |
| ML-7002 | PM Tri | 6.0 | 85 | 300 | HOLD-OFF VOLTAGE 60000, CURRENT AMPS 60 | | | | 2000 | OIL |
| ML-7003 | PM Tri | 8.5 | 60 | 200 | HOLD-OFF VOLTAGE 40000, CURRENT AMPS 60 | | | | 3000 | FORCED AIR |
| ML-7007 | Tet | 5.0 | 170 | 10 | 6500 | 4 | 24000 | 10000 | 220 | FORCED AIR |
| ML-7120 | Tri | 7.0 | 85 | 4.4 | 10000 | 2.2 | 20000 | 12500 | 30 | WATER |
| ML-7121 | Tri | 7.0 | 85 | 4.4 | 10000 | 2.2 | 20000 | 10000 | 30 | FORCED AIR |
| ML-7124 | Tri | 8.0 | 200 | 4.4 | 12500 | 8.0 | 80000 | 40000 | — | WATER |
| ML-7125 | Tri | 8.0 | 200 | 4.4 | 12500 | 4.5 | 55000 | 20000 | — | FORCED AIR |
| ML-7209 | UHF Tri | 6.0 | 1.0 | 100 | 3500 | 0.01* | 35 | 35 | 3000 | FORCED AIR |
| ML-7210 | UHF Tri | 6.3 | 0.85 | 75 | 3500† | 3.0† | 26 | 26 | 3000 | FORCED AIR |
| ML-7211 | UHF Tri | 6.3 | 1.23 | 80 | 3000† | 6.0 | 36 | 40 | 2500 | FORCED AIR |
| ML-7248 | SW Tet | 6.3 | 11.7 | — | HOLD-OFF VOLTAGE 125000, CURRENT AMPS 2 | | | 200 | — | OIL |
| ML-7249 | SW Tet | 6.3 | 11.7 | — | HOLD-OFF VOLTAGE 125000, CURRENT AMPS 2 | | | {300 / {500 | — | {FORCED AIR / { OIL |
| ML-7333 | PM Tri | 6.0± 5% | 16. | 175 | 20000 | 18 | — | 60 | — | RADIATION |
| ML-7335 | PM Tri | 6.0± 5% | 70. | 125 | {16000 / { 8000 | {60 / {10 | — | {1000 / {3000 | — | {CONVECTION / { WATER |

# PHOTOSENSITIVE AND STORAGE TUBES

| TYPE | CLASS | PHOTOCATHODE SIZE DIAGONAL | DEFLECTION METHOD | SPECTRAL RESPONSE | SIGNAL OUTPUT | GRID VOLTAGE $G_1$ | $G_2$ | $G_3$ | $G_4$ | $G_5$ | $G_6$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ML-5820 | 1.0. | 1.8 " | Magnetic | S-10 | 3-24μA | —24 to —110 | 300 | 250 to 330 | 140 to 180 | 0 to 125 | - 300 to - 405 |
| ML-6198 | Vid | .625" | Magnetic | S-18 | .1- .2μA | 125 | 350 | 350 | 350 | — | — |
| ML-7038A | Vid | .625" | Magnetic | S-18 | .1- .3μA | 125 | 300 | 350 | 350 | — | — |
| ML-7291A | Vid | .625" | Magnetic | S-18 | .1 - .3μA | 125 | 350 | 350 | 350 | — | — |
| ML-7351 | Vid | .625" | Magnetic | {6000A / {(peak) | .1 - .32μA | 125 | 350 | 350 | 350 | — | — |

| | | DIAMETER | DEFLECTION METHOD | STORAGE | PHOSPHOR | MAXIMUM VOLTAGES ANODE FIRST | ANODE SECOND | SCREEN |
|---|---|---|---|---|---|---|---|---|
| ML-6577 | 3D | 5" | Electro-Static | Bistable | Pi (Any) | - 3.400 | 300 | 4,000 |
| ML-C19K | D | 19" | Magnetic | No | Usually P11 P14 | 1.300 | 3,600 | 15,000 |

NOTES: A.F. — Amplification Factor
‡ — D.C. Cathode Current
* — Duty Cycle: 0.0033
† — Duty Cycle: 0.0025 Max.




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

# KIERULFF ELECTRONICS, INC.

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

SP-7072 360-20M PRINTED IN U.S.A.