

SPOTLIGHT ON

MACOM™

 microwave





















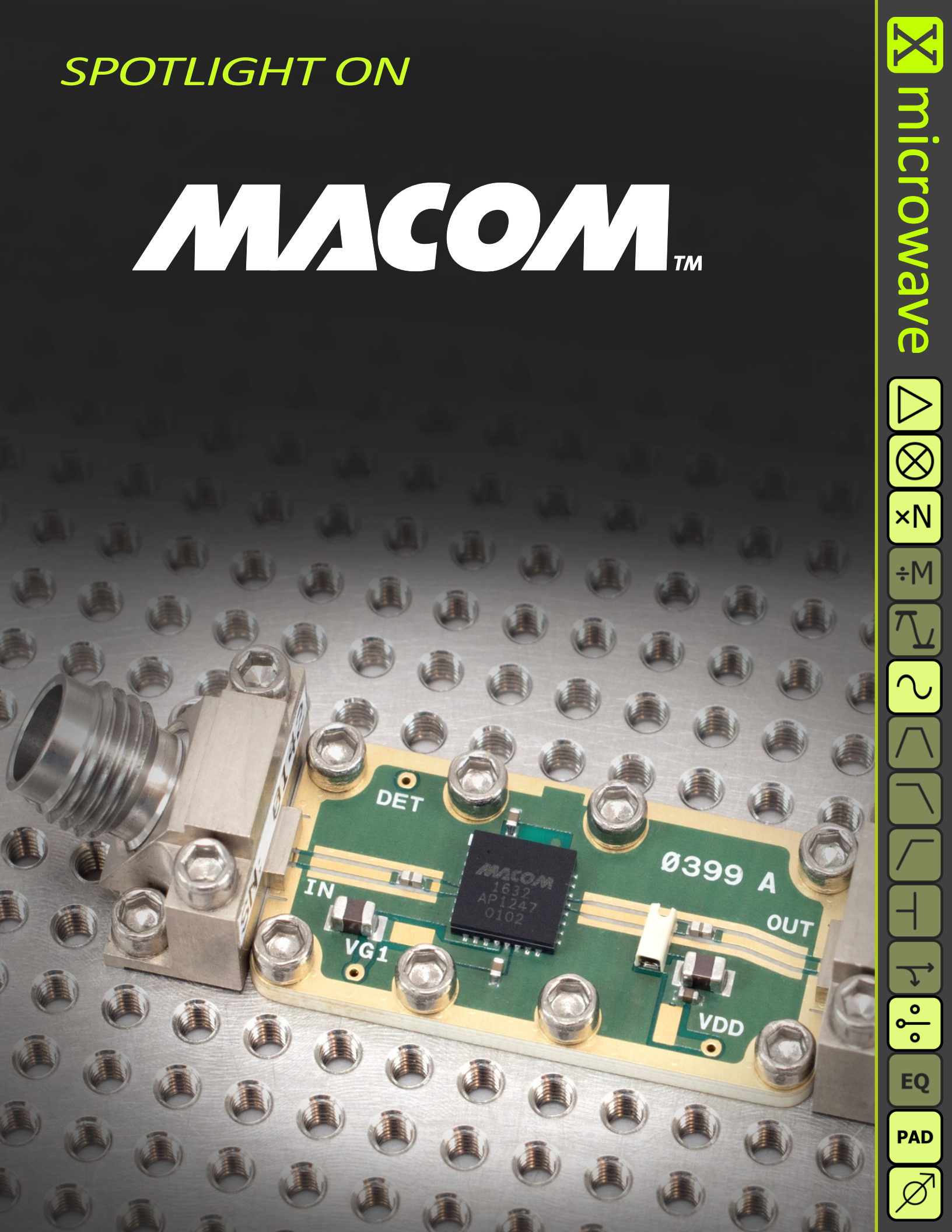


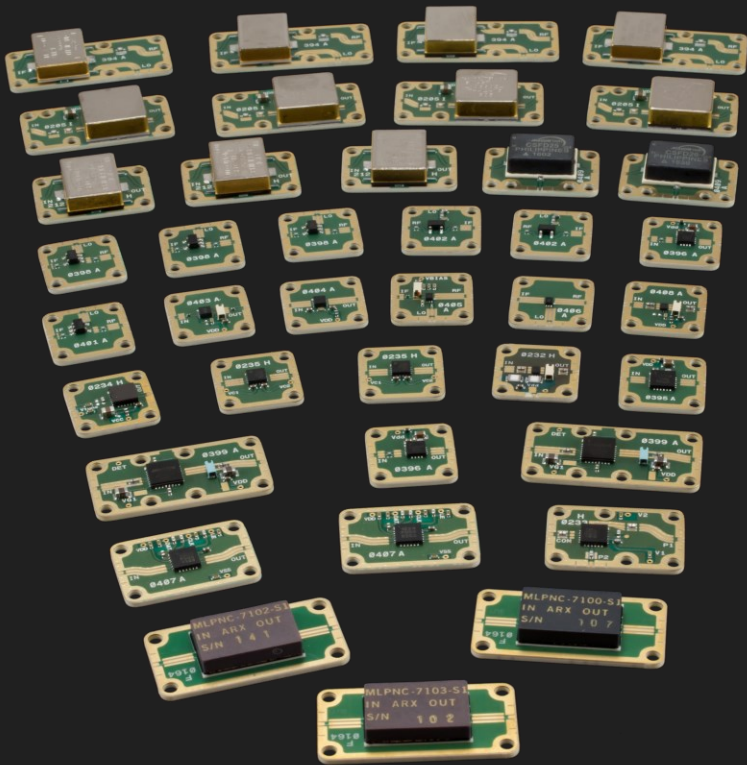




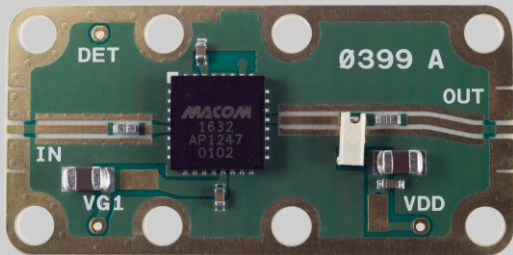








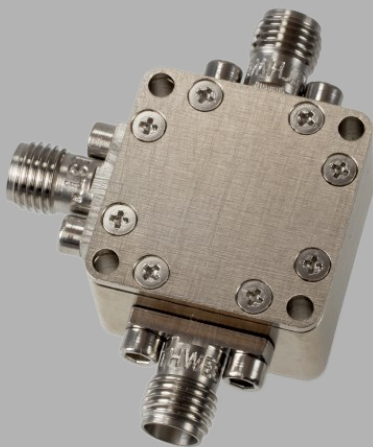
- Modular Building Block System
- MACOM Products from RF to Light
- VCOs, Amps, Mixers, Mults, Switches, Phase Shifters, Attenuators...
- Drop-In, Connectorized and EVAL
- Free Online Simulation and Mechanical Layout Tool



Drop-In Option

At left is X-Microwave part number XM-A4D7-0804D, populated with a MACOM Wideband Distributed Amplifier PN: MAAP-011247

Order code: D example: XM-A4D7-0804D (MACOM PN:MAAP-011247)

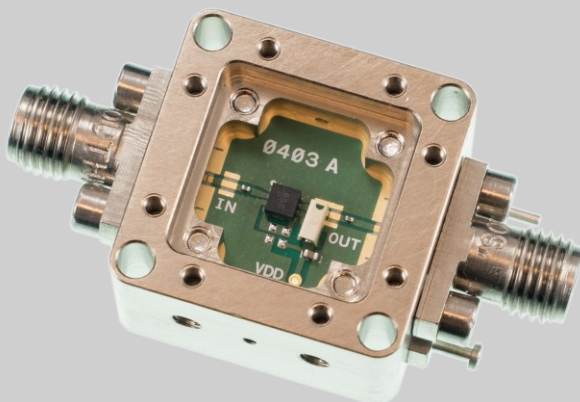


Connectorized Housing Option

The Machined Housing Option features a precision-machined, nickel-plated aluminum housing with Heli-Coil® inserts and thruhole mounting provisions.

Connector options include Super SMA, 2.92mm, and 1.85mm.

Order code: C example: XM-A4A4-0404C (MACOM PN: MAMX-011009)



Open Frame "EVAL" Option

Select the EVAL Option whenever a low-cost, connectorized, high performance means is needed to evaluate a specific X-MWblock. Since the connectorized frame makes a solderless connection to the X-MWblock, both the frame and the block can be independently reused.

Order code: E example: XM-A4D9-0404E (MACOM PN: MAAL-011078)

* **Option Code**
 D = Drop-In
 C = Connectorized
 E = EVAL Option

VCOs



| MACOM PN | X-MW PN | Freq Range (GHz) | Vtune Range (V) | Phase Noise (dBc/Hz) | Supply (V) |
|-------------|---------------|------------------|-----------------|----------------------|------------|
| MAOC-415000 | XM-A4C2-0404D | 10 to 20 | 0 - 18 | -90 @ 100 kHz | +5 |
| MAOC-409000 | XM-A4C3-0404D | 6 to 12 | 0 - 23 | -95 @ 100 kHz | +5 |

Amplifiers



| MACOM PN | X-MW PN | Freq Range | Gain (dB) @ Freq | P1dB (dBm) | Supply (V) @ (mA) |
|-------------|---------------|----------------|------------------|------------|-------------------|
| MAAM-011101 | XM-A345-0404D | 4 to 20 GHz | 16 @ 12 GHz | 19 | 5 to 12 @ 45 |
| MAAM-011206 | XM-A4D6-0404D | DC to 15 GHz | 14 @ 5 GHz | 18.5 | 5 @ 72 |
| MAAP-011247 | XM-A4D7-0804D | 0.1 to 22 GHz | 14 @ 22 GHz | 30 | 15 @ 500 |
| MAAP-011248 | XM-A4D8-0804D | 0.1 to 22 GHz | 14 @ 20 GHz | 27 | 9 to 12 @ 400 |
| MAAL-011078 | XM-A4D9-0404D | 0.7 to 6 GHz | 23 @ 1.9 GHz | 17.5 | 3 to 5 @ 30 to 80 |
| MAAL-011129 | XM-A3Y1-0404D | 18 to 31.8 GHz | 22 @ 24 GHz | 16 | 5 @ 50 |
| MAAL-011130 | XM-A3Y2-0404D | 2.4 to 18 GHz | 20 @ 10 GHz | 16 | 5 @ 30 |
| SMA87 | XM-A3Y3-0804D | 10 to 400 MHz | 13 @ 400 MHz | 16 | 15 @ 35 |
| SMA89 | XM-A3Y4-0804D | 10 to 800 MHz | 20 @ 800 MHz | 16 | 15 @ 50 |
| SMA181 | XM-A3Y5-0804D | 10 to 250 MHz | 15 @ 250 MHz | 20 | 15 @ 105 |
| SMA19-1 | XM-A3Y6-0804D | 10 to 1000 MHz | 10 @ 1000 MHz | 20 | 15 @ 95 |
| SMA29-1 | XM-A3Y7-0804D | 10 to 1500 MHz | 8 @ 1500 MHz | 20 | 15 @ 95 |

Mixers



| MACOM PN | X-MW PN | LO Freq | RF Freq | IF Freq | LO Level (dBm) | Conv Loss (dB) |
|------------------|---------------|------------------|------------------|----------------|----------------|----------------|
| MAMX-011009 | XM-A4A4-0404D | 4 to 20 GHz | 14 to 32 GHz | DC to 7 GHz | +15 | 12 |
| MAMX-011021 | XM-A4A5-0404D | 3 to 33 GHz | 5 to 35 GHz | DC to 4.5 GHz | +14 | 9 |
| MA4EX240L1-1225T | XM-A4A8-0404D | 1.7 to 2.5 GHz | 1.7 to 2.5 GHz | DC to 400 MHz | +5 | 7 |
| MA4EX580L1-1225T | XM-A4A9-0404D | 4.7 to 6 GHz | 4.7 to 6 GHz | DC to 1050 MHz | +5 | 8 |
| MA4EX950H1-1225T | XM-A4B2-0404D | 700 to 1200 MHz | 700 to 1200 MHz | DC to 400 MHz | +13 to +17 | 8 |
| MA4EX950L1-1225T | XM-A4B3-0404D | 700 to 1200 MHz | 700 to 1200 MHz | DC to 400 MHz | +3 to +7 | 8 |
| MAMXSS0012 | XM-A4B5-0404D | 800 to 1000 MHz | 800 to 1000 MHz | DC to 200 MHz | +3 to +8 | 8 |
| MAMXSS0013 | XM-A4B6-0404D | 1400 to 2100 MHz | 1400 to 2100 MHz | DC to 500 MHz | +3 to +8 | 8 |
| SM4TH | XM-A4B7-0904D | 1 to 3400 MHz | 1 to 3400 MHz | 1 to 2000 MHz | +23 | 8 |
| SM5TH | XM-A4B8-0904D | 50 to 5000 MHz | 50 to 5000 MHz | 50 to 3000 MHz | +23 | 8 |
| SM6EH | XM-A4B9-0904D | 5 to 750 MHz | 5 to 500 MHz | DC to 500 MHz | 20 | 8 |
| SM2E | XM-A4C1-0904D | 10 to 1000 MHz | 10 to 1000 MHz | DC to 600 MHz | +20 | 8 |

Multipliers



| MACOM PN | X-MW PN | Mult Factor | Input Freq | Input Pwr (dBm) | Output Pwr (dBm) |
|--------------|---------------|-------------|------------------|-----------------|------------------|
| MLPNC-7100S1 | XM-A3R5-0804D | Comb | 75 to 250 MHz | +18 to +24 | See Data Sheet |
| MLPNC-7102S1 | XM-A3R6-0804D | Comb | 300 to 700 MHz | +18 to +24 | See Data Sheet |
| MLPNC-7103S1 | XM-A3R7-0804D | Comb | 600 to 1500 MHz | +18 to +24 | See Data Sheet |
| XX1002-QH | XM-A3Y9-0404D | x2 | 2.5 to 6 GHz | -3 to +3 | +13 to +16 |
| XX1002-QH | XM-A4C6-0404D | x2 | 2.5 to 6 GHz | -3 to +3 | +13 to +16 |
| XX1007-QH | XM-A4C7-0404D | x2 | 13.5 to 17 GHz | +7 | +20 |
| XX1010-QH | XM-A4C9-0404D | x2 | 14.625 to 15 GHz | +3 to +10 | +18 to +22 |
| SFD25 | XM-A4D1-0604D | x2 | 10 to 2400 MHz | +10 | -2 |
| SFD25H | XM-A4D2-0604D | x2 | 5 to 2400 MHz | +23 | +10 |
| SFD26 | XM-A4D3-0604D | x2 | 50 to 3300 MHz | +10 | -3 |
| CSFD25 | XM-A4D4-0604D | x2 | 5 to 2400 MHz | +10 | -2 |
| CSFD26 | XM-A4A1-0604D | x2 | 50 to 3300 MHz | +10 | -2 |

RF Switches



| MACOM PN | X-MW PN | Freq Range | Insertion Loss (dB) | Isolation (dB) | Switching Speed |
|-------------|---------------|--------------|---------------------|----------------|-----------------|
| MASW-008322 | XM-A351-0604D | DC to 20 GHz | 2 dB @ 20 GHz | 40 dB @ 20 GHz | < 25 ns |
| MASW-011036 | XM-A3M8-0404D | 26 to 40 GHz | 1.5 dB @ 40 GHz | 35 dB @ 40 GHz | < 30 ns |

Phase Shifters



| MACOM PN | X-MW PN | Freq Range | Phase Adj | LSB | Control |
|-------------|---------------|-------------|-----------------|----------|---------|
| MAPS-010146 | XM-A4A2-0604D | 8 to 12 GHz | 360 deg / 4-bit | 22.5 deg | Serial |
| MAPS-010166 | XM-A4A3-0604D | 8 to 12 GHz | 360 deg / 6-bit | 5.6 deg | Serial |

Attenuators

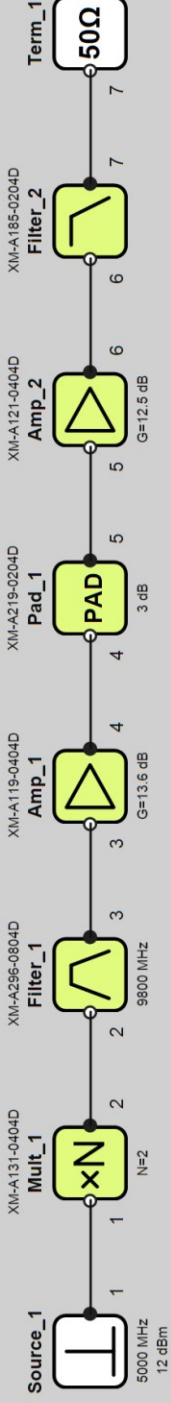


| MACOM PN | X-MW PN | Freq Range | Insertion Loss (dB) | Atten Range (dB) | IIP3 (dBm) |
|-------------|---------------|-------------|---------------------|------------------|------------|
| MAAT-010521 | XM-A352-0404D | 5 to 45 GHz | 2 @ 20 GHz | > 30 | 30 |
| MAAV-011013 | XM-A3Y8-0404D | 5 to 45 GHz | 1.5 @ 20 GHz | > 30 | 30 |



10GHz
20GHz
50GHz
BOM
TIPS

| Part Number | QTY | Price (USD) | Power (mW) |
|---------------|-----|-----------------|------------|
| XM-A131-0404D | 1 | \$79.95 | 0 |
| XM-A296-0804D | 1 | \$89.95 | 0 |
| XM-A119-0404D | 1 | \$84.95 | 357 |
| XM-A219-0204D | 1 | \$24.95 | 0 |
| XM-A121-0404D | 1 | \$84.95 | 350 |
| XM-A185-0204D | 1 | \$22.95 | 0 |
| Total | | \$387.70 | 707 |



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TECHNOLOGIES

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