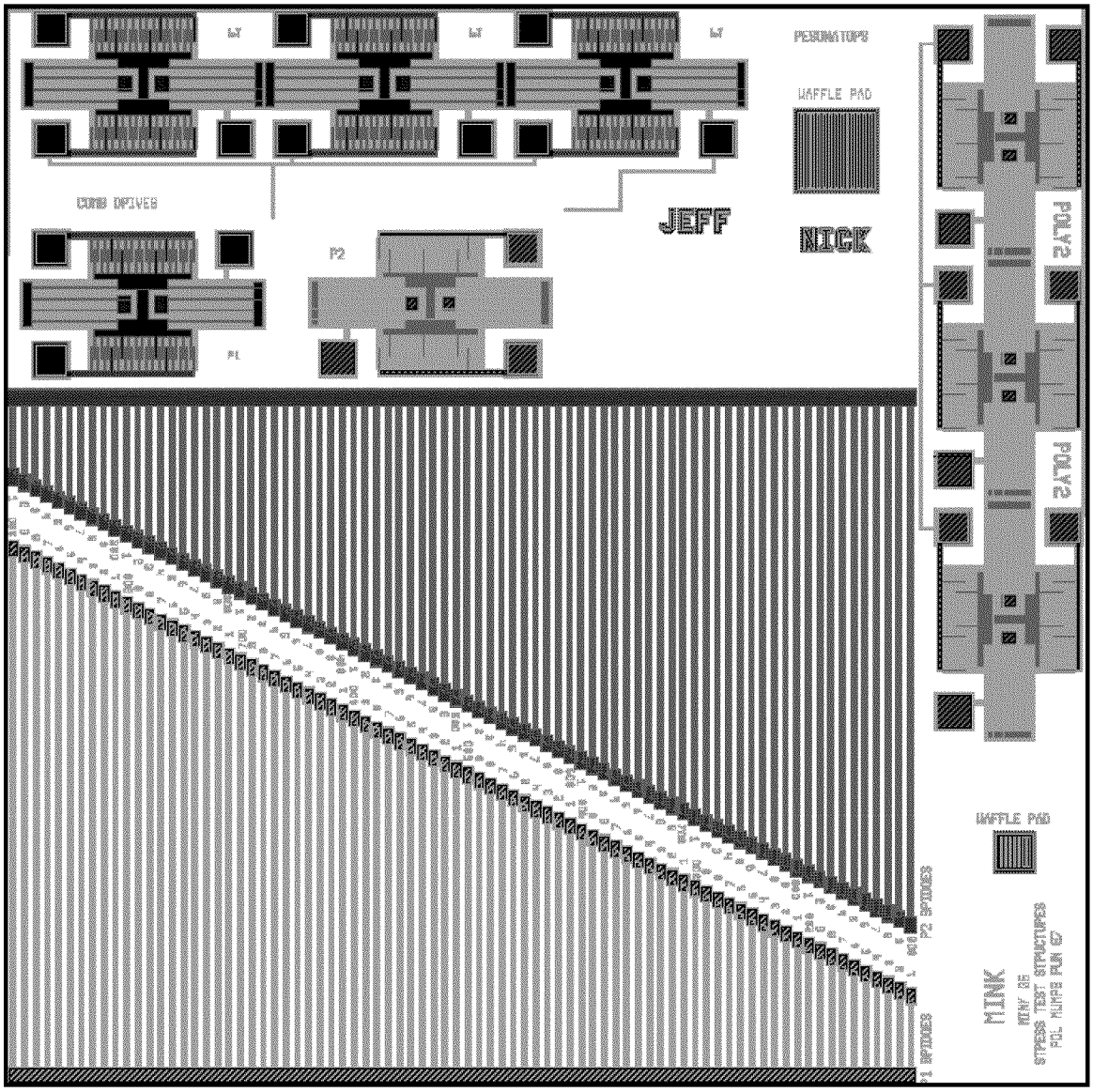
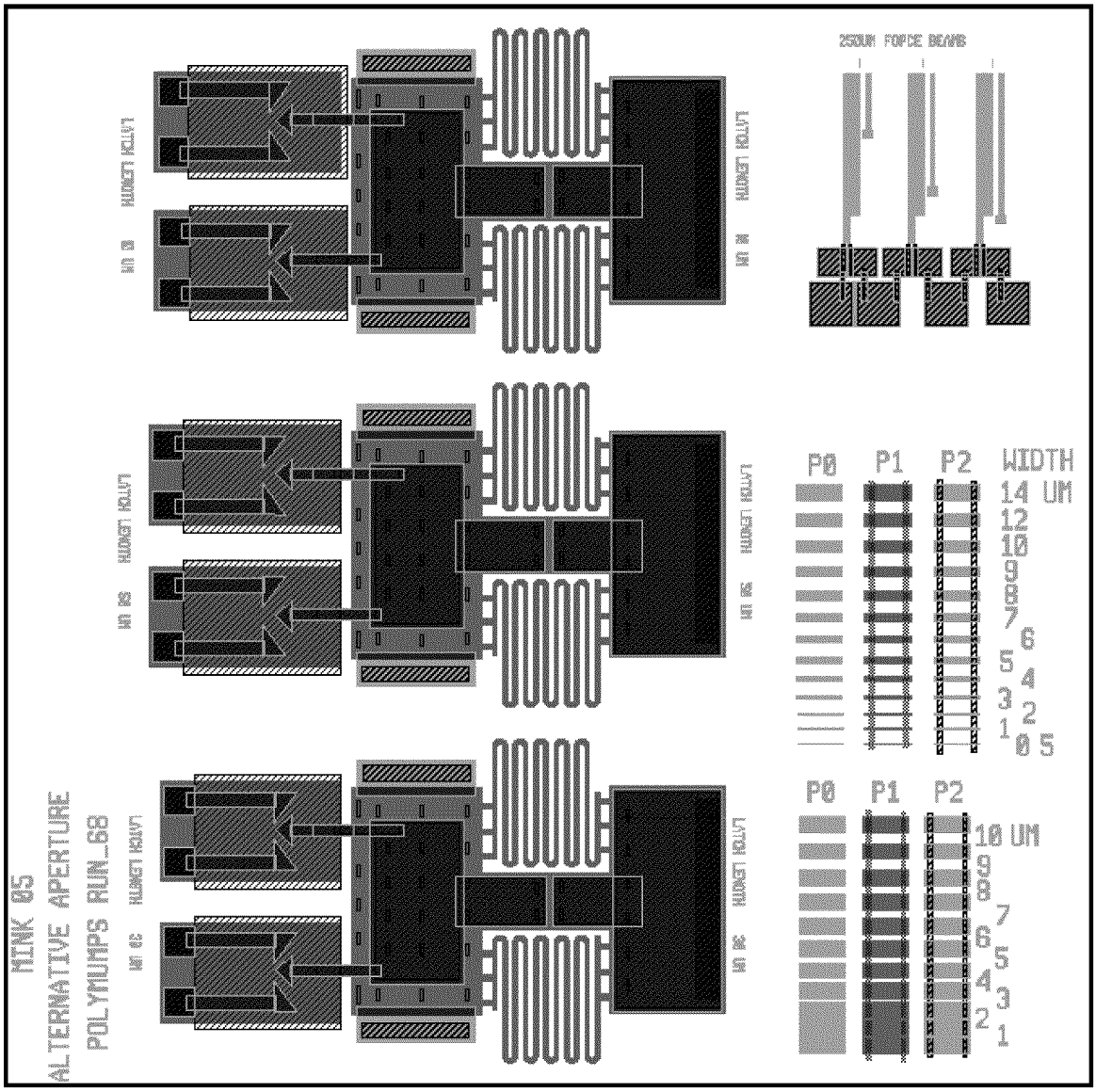
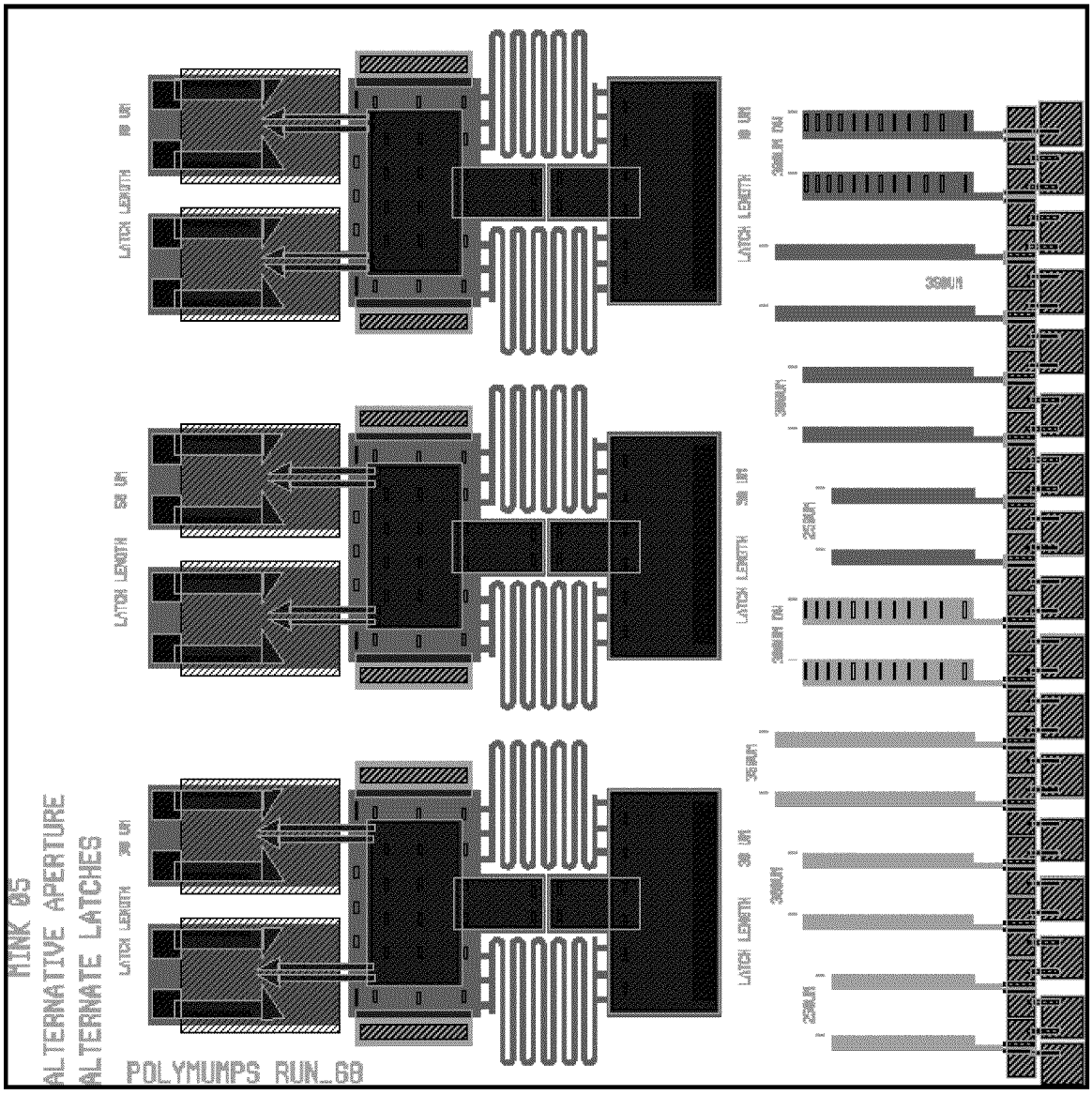


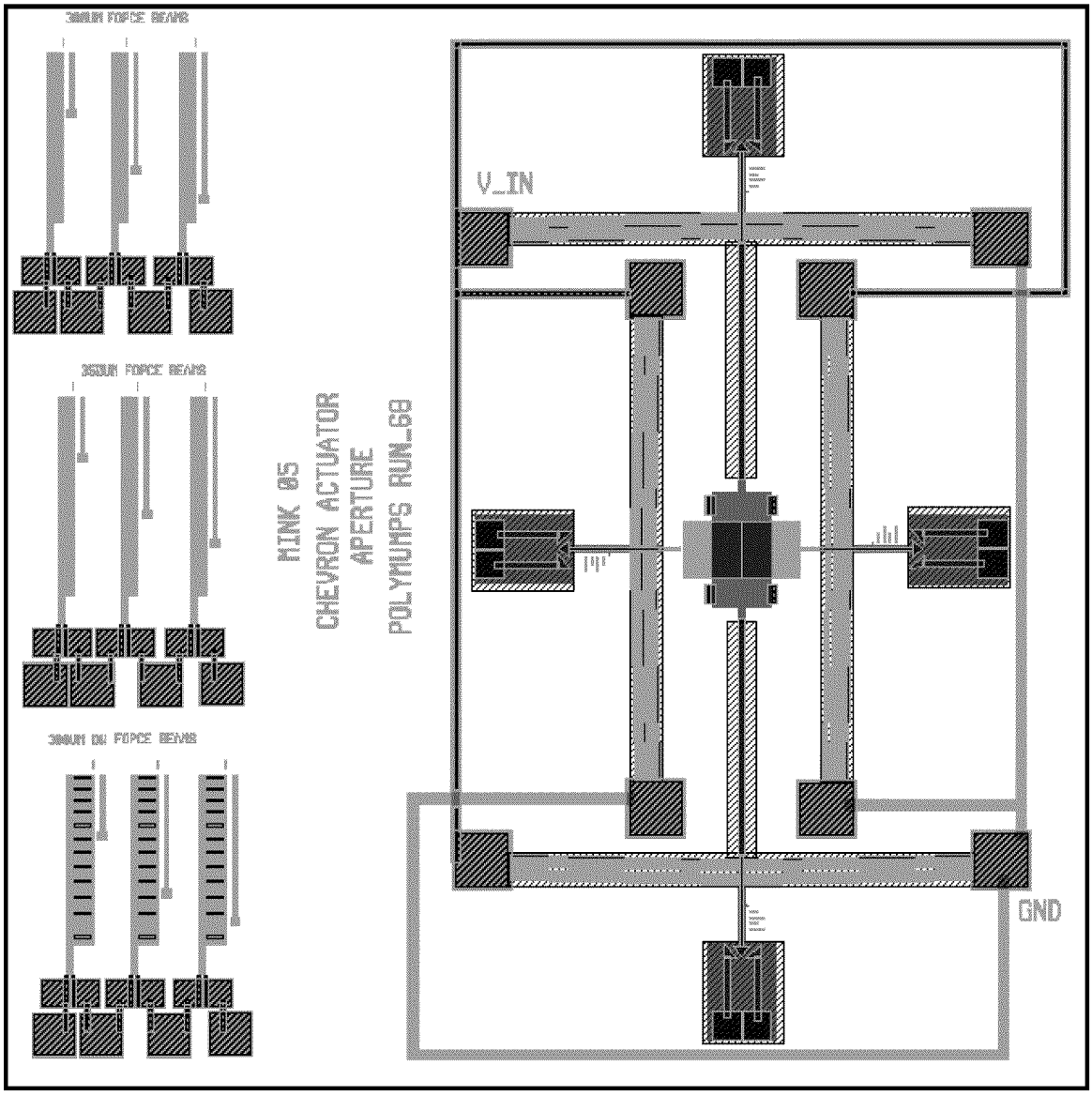
PolyMUMPs Run No.:	67
Working Nomenclature	Die #8
Fabricated Devices:	Poly1 Fixed-Fixed Beams – 110 μm to 900 μm Poly2 Fixed-Fixed Beams – 110 μm to 900 μm Poly1 Comb Drive Resonators Poly2 Comb Drive Resonators Fabrication Process Test Structures
Main Uses:	Measure Beam Deflection to Determine Residual Stress Measure Resonating Frequency in Comb Drives to Determine Young's Modulus Observe Fabrication Process Versus Design Layout Observe/Measure Fabricated Layer Thicknesses and Etch Depths



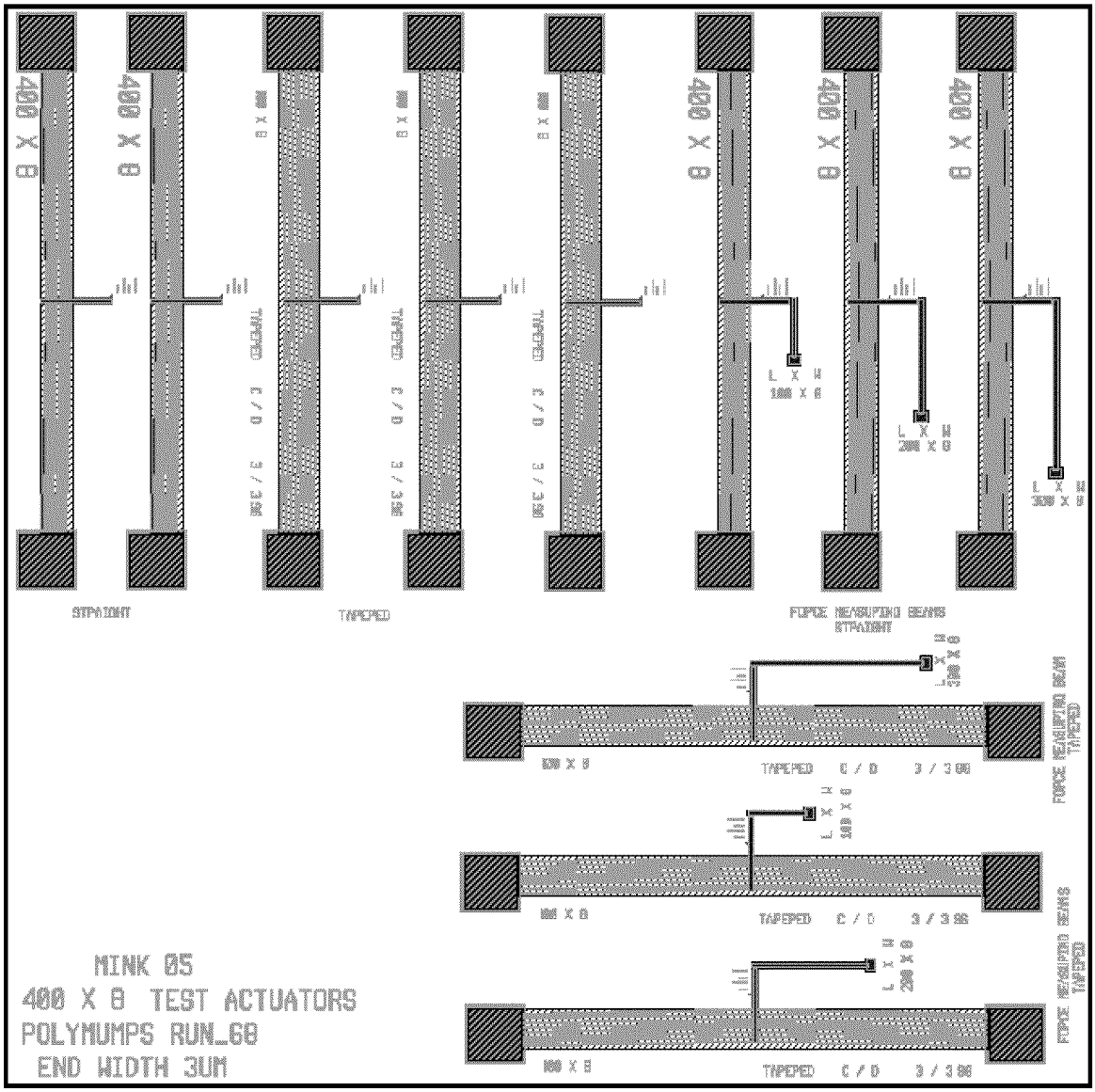
PolyMUMPs Run No.:	68
Working Nomenclature	Die #9
Fabricated Devices:	100 μm Poly1/Poly2 Single-Sided Sliding Plate Rotating Apertures, with Latch Distances of: 30 μm, 40 μm, and 50 μm. 250 μm Poly2 Electrothermal Actuators with 8 μm-Wide Force Measuring Beams Width and Spacing Test Structures
Main Uses:	Test Alternative Rotating Aperture Designs with Varying Latching Distances Observe Effects of Guide Rails on Sliding Plate Measure Deflection of Electrothermal Actuator to Determine Force Observe/Measure Limits of Fabrication Process



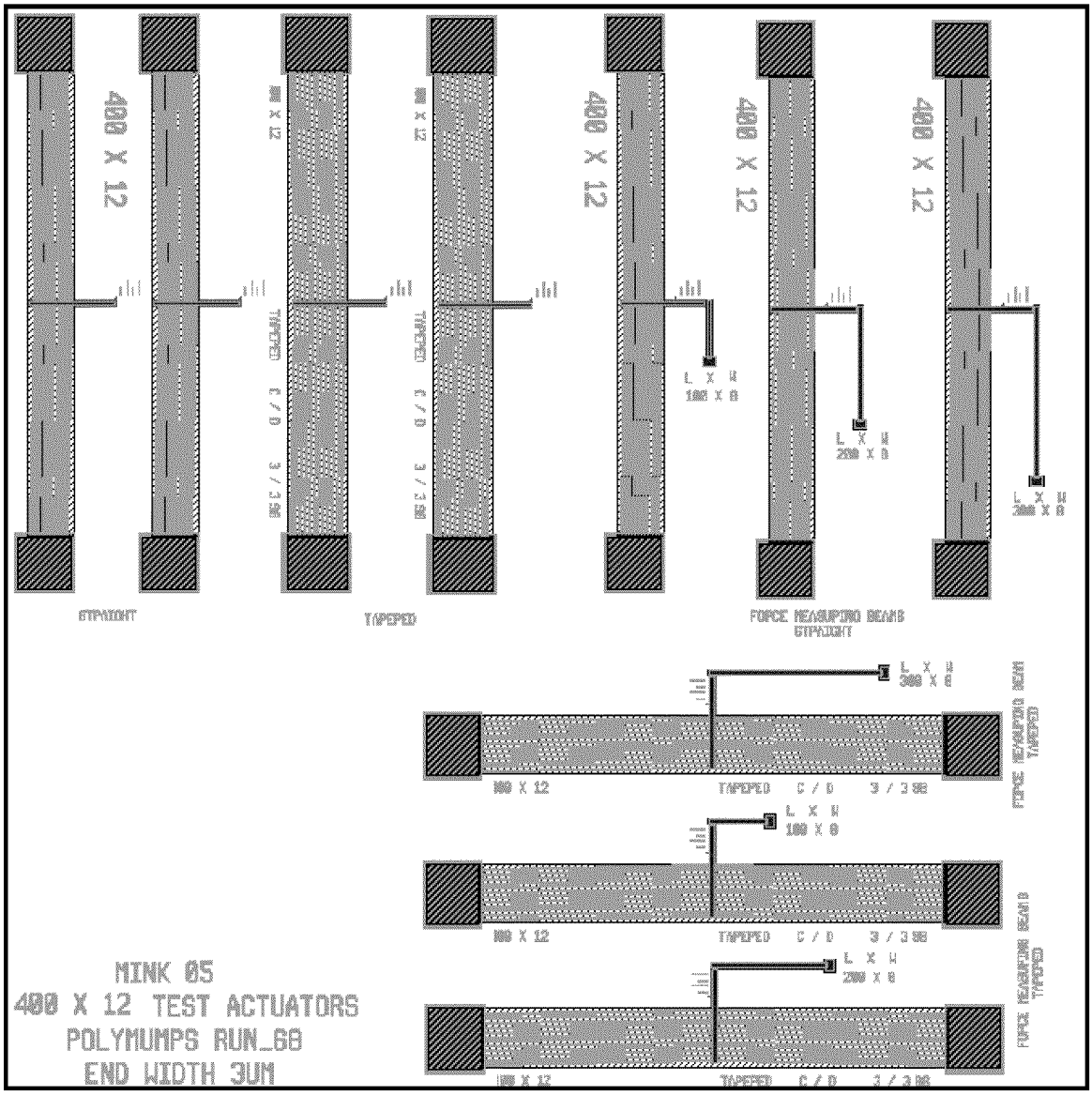
PolyMUMPs Run No.:	68
Working Nomenclature	Die #10 (Modified Die #9)
Fabricated Devices:	100 µm Poly1/Poly2 Single-Sided Sliding Plate Rotating Apertures, with Modified Latches Latch Distances:30 µm, 40 µm, and 50 µm. Poly1 Electrothermal Actuators of Various Dimensions Poly2 Electrothermal Actuators of Various Dimensions
Main Uses:	Test Alternative Rotating Aperture Designs with Modified Latches Observe Effects of Guide Rails on Sliding Plate Test/Measure Performance Characteristics of Electrothermal Actuators



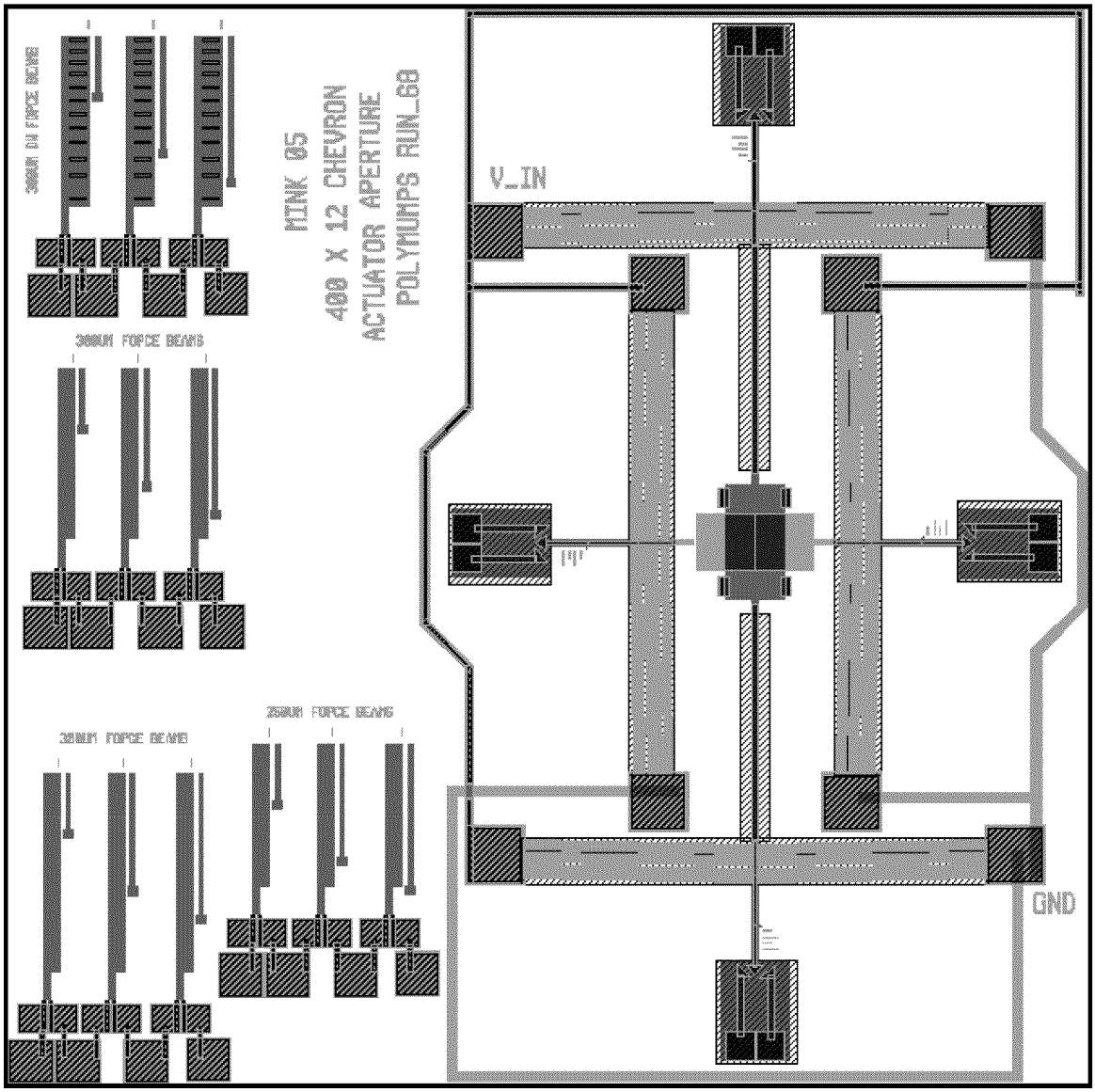
PolyMUMPs Run No.:	68
Working Nomenclature	Die #11 (Interrupter Mechanism #1)
Fabricated Devices:	S&A Interrupter Device: Four Chevron Actuators with Latches, 8 × (400 μm × 3 μm) Arms, Poly1 and Poly2 Overlapping Interrupter Plates 350 μm, 300 μm, and 300 μm (Double Width) Poly2 Electrothermal Actuators (ETA) with 8 μm-Wide Force Measuring Beams
Main Uses:	Test Operation of S&A Interrupter Device Measure Opened Aperture Area, Actuator Deflection, System Resistance, and Drive Power Limit Observe/Measure Latch Capability Test Operation of Device with Dissimilar Wires Measure Deflection of ETAs to Determine Force



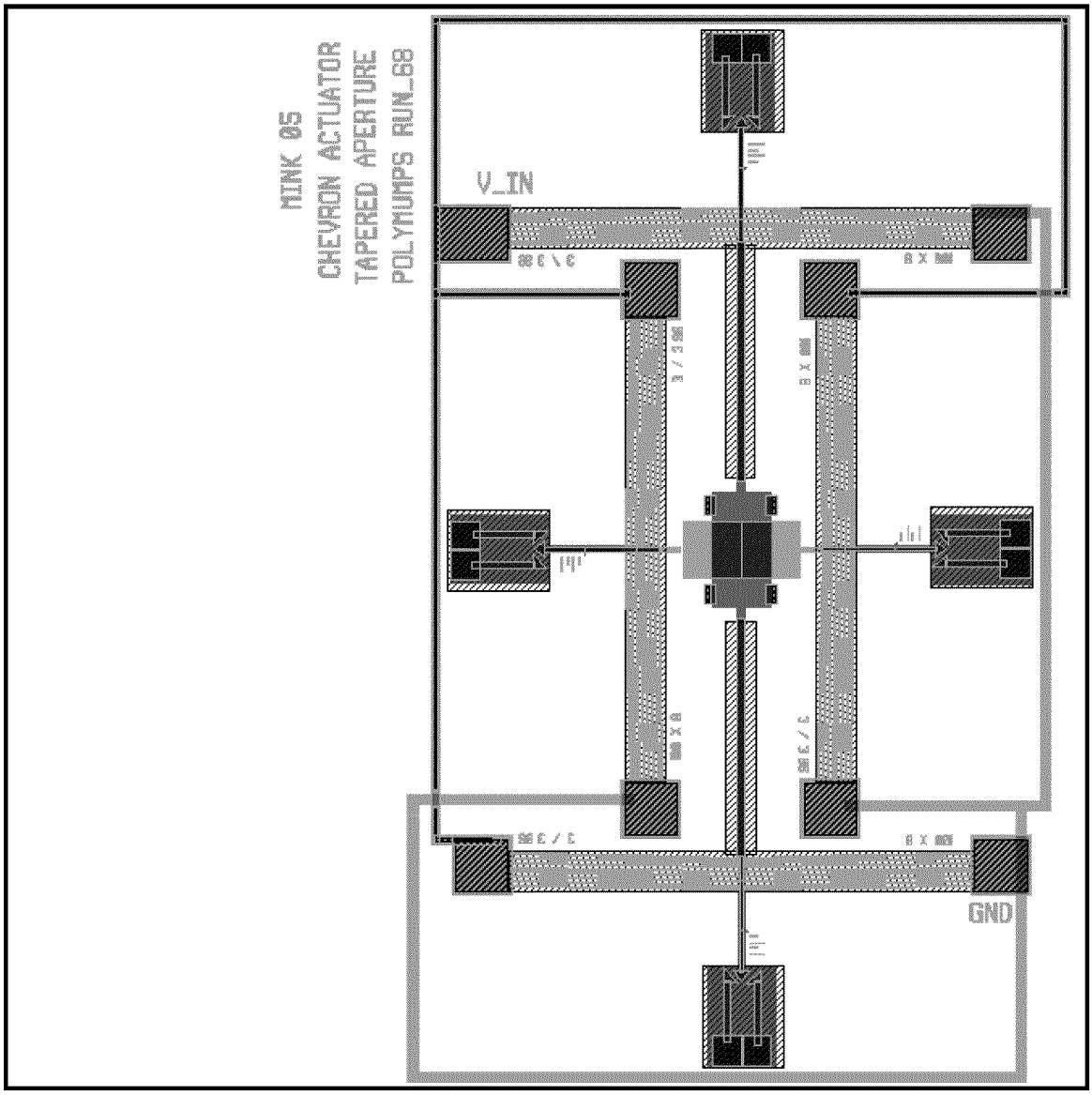
PolyMUMPs Run No.:	68
Working Nomenclature	Die #12
Fabricated Devices:	Chevron Electrothermal Actuators Test Die: - 8 × (400 μm x 3 μm) Arms - Stand-Alone Actuators - Actuators with 8 μm-Wide Force Measuring Beams (Straight and Tapered Armed Actuators Included)
Main Uses:	Test Operation of Chevron Electrothermal Actuators Measure Actuator Deflection, Drive Voltage, and Resistance Measure Deflection on Force Beams to Determine Actuator Force



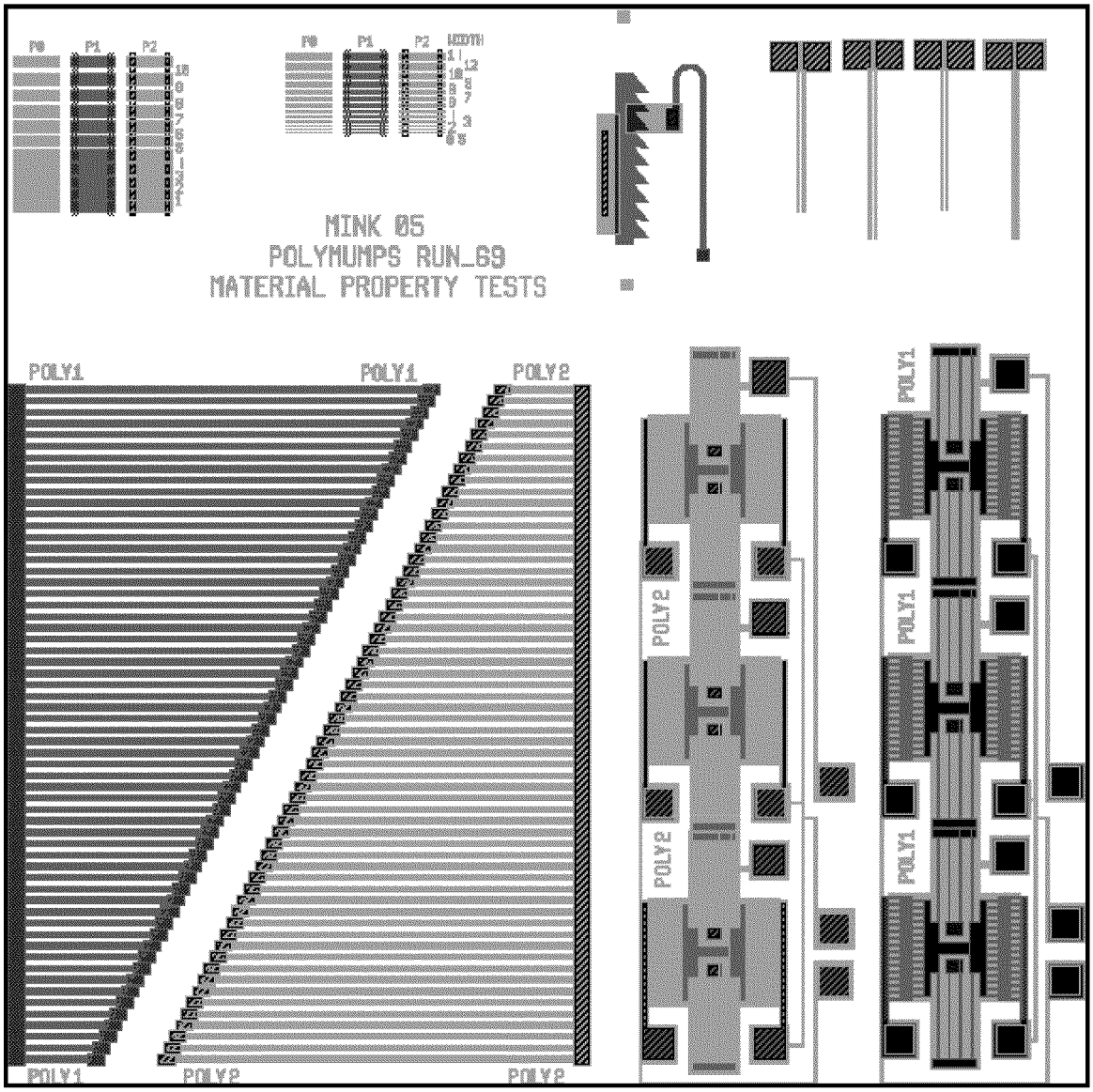
PolyMUMPs Run No.:	68
Working Nomenclature	Die #13
Fabricated Devices:	Chevron Electrothermal Actuators Test Die: - 12 × (400 μm x 3 μm) Arms - Stand-Alone Actuators - Actuators with 8 μm-Wide Force Measuring Beams (Straight and Tapered Armed Actuators Included)
Main Uses:	Test Operation of Chevron Electrothermal Actuators Measure Actuator Deflection, Drive Voltage, and Resistance Measure Deflection on Force Beams to Determine Actuator Force



PolyMUMPs Run No.:	68
Working Nomenclature	Die #14 (Interrupter Mechanism #2)
Fabricated Devices:	S&A Interrupter Device: Four Chevron Actuators with Latches, 12 × (400 µm × 3 µm) Arms, Poly1 and Poly2 Overlapping Interrupter Plates 350 µm, 300 µm, 300 µm (Double Width), and 250 µm Poly1 Electrothermal Actuators (ETA) with 8 µm-Wide Force Measuring Beams
Main Uses:	Test Operation of S&A Interrupter Device Measure Opened Aperture Area, Actuator Deflection, System Resistance, and Drive Power Limit Observe/Measure Latch Capability Test Operation of Device with Dissimilar Wires Measure Deflection of ETAs to Determine Force



PolyMUMPs Run No.:	68
Working Nomenclature	Die #15 (Interrupter Mechanism #3)
Fabricated Devices:	S&A Interrupter Device: Four Chevron Actuators with Latches, 8 × (400 μm × 3 μm) Tapered Arms, Poly1 and Poly2 Overlapping Interrupter Plates
Main Uses:	Test Operation of S&A Interrupter Device Measure Opened Aperture Area, Actuator Deflection, System Resistance, and Drive Power Limit Observe/Measure Latch Capability Test Operation of Device with Dissimilar Wires



PolyMUMPs Run No.:	69
Working Nomenclature	Die #16
Fabricated Devices:	Poly1 and Poly2 Fixed-Fixed Beams – up to 700 μm Poly1 and Poly2 Comb Drive Resonators Width and Spacing Test Structures Ratcheting Latch Test Structure Residual Stress Beams with Electrical Contacts
Main Uses:	Measure Beam Deflection to Determine Residual Stress Measure Resonating Frequency in Comb Drives to Determine Young's Modulus Observe/Measure Limits of Fabrication Process Test/Observe Feasibility of Ratcheting Structure Test/Measure Joule Heating Effects on Residual Stress Beams