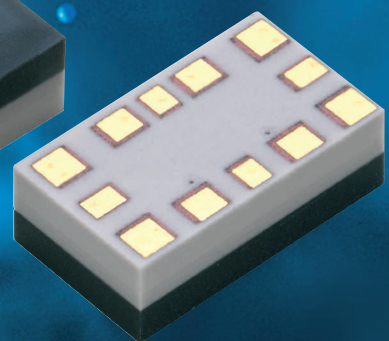
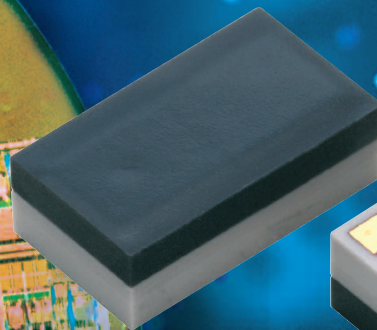
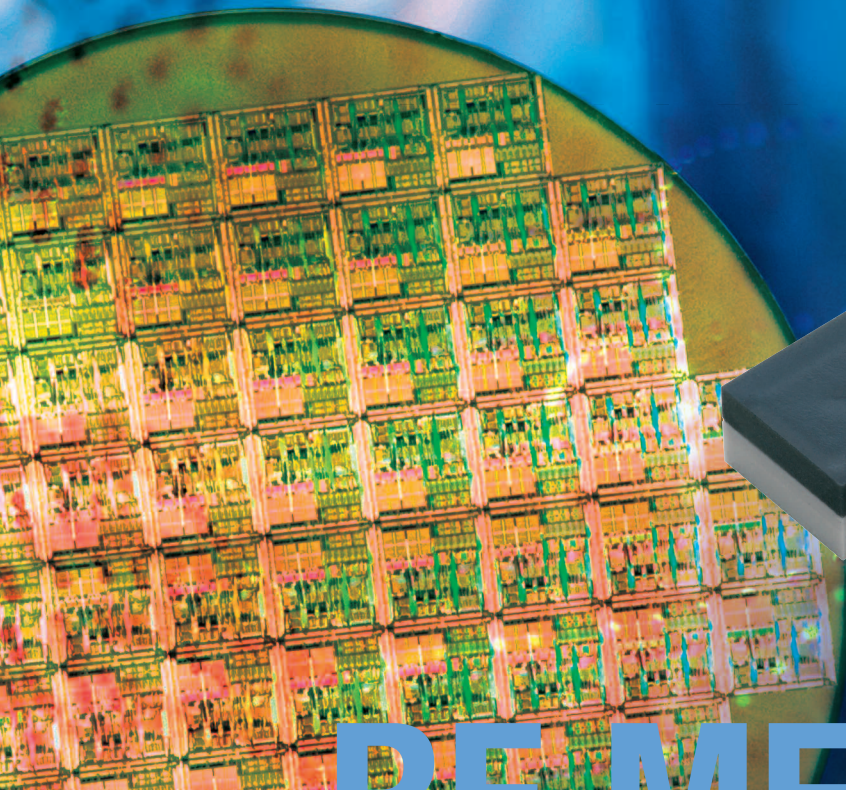


OMRON



RF MEMS Switch

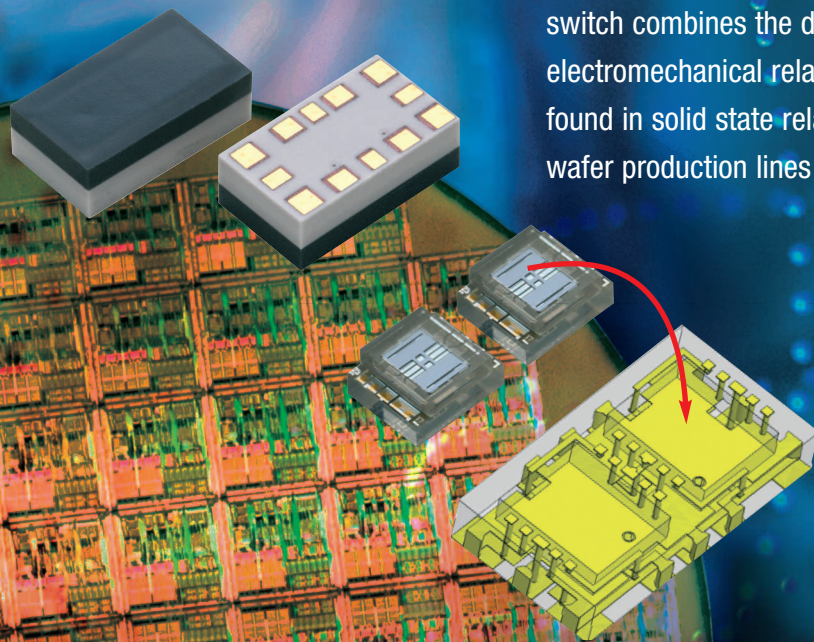
RF Switch Based on MEMS Technology

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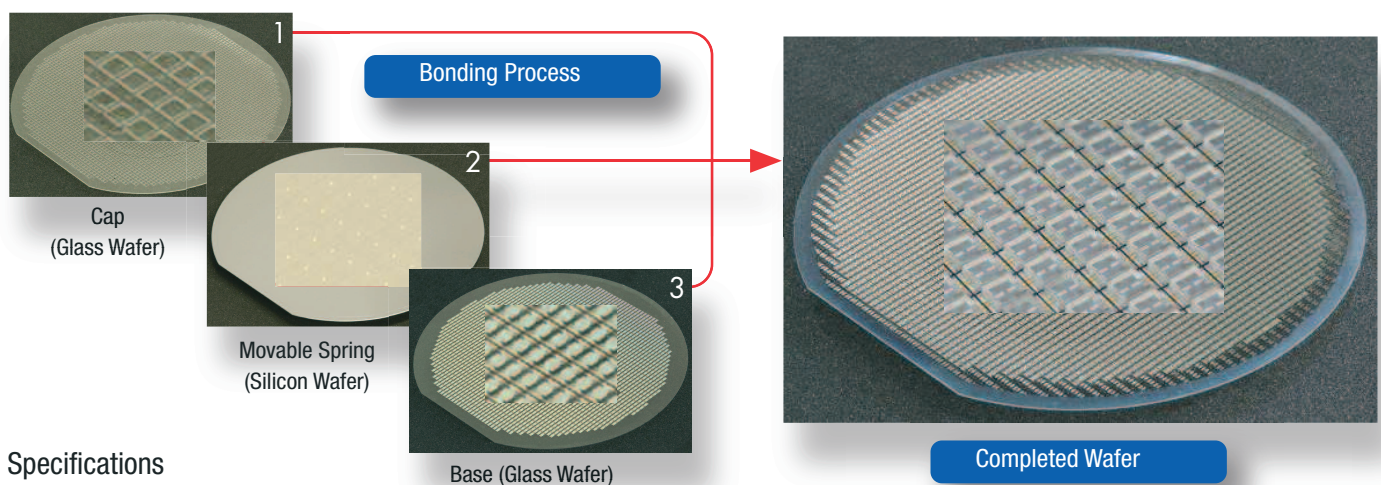
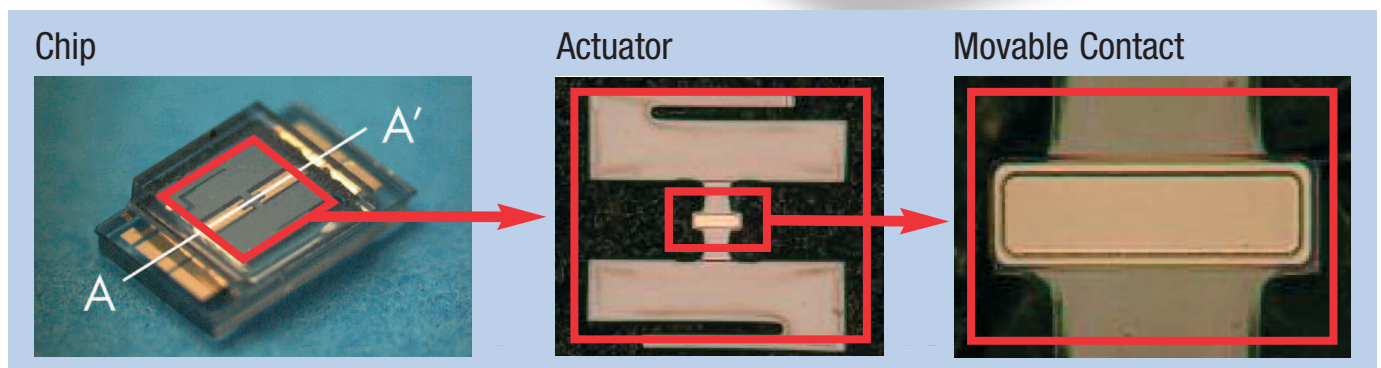
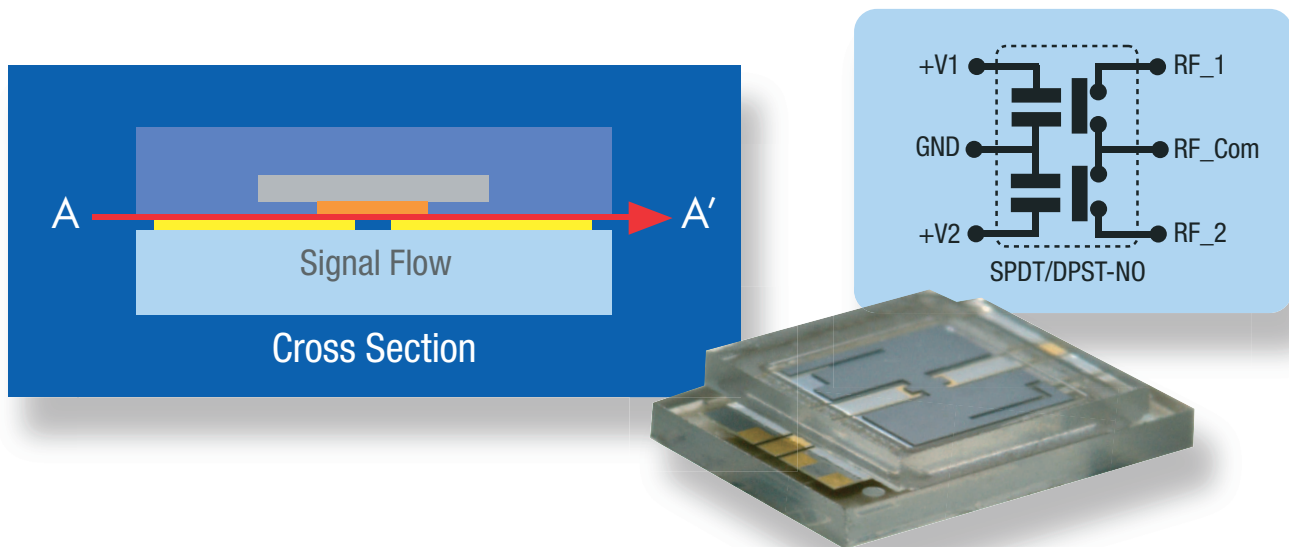
RF MEMS SWITCH DESIGN

Mechanical RF Switching Relay Based on MEMS Technology

Combining its long history of innovative relay products with its MEMS (Micro Electro Mechanical System) expertise, Omron has developed a new RF MEMS Switch to meet the requirements of the ATE market. Using an electrostatic drive mechanism, the switch combines the desirable HF characteristics of electromechanical relays with a life expectancy generally only found in solid state relays. Omron utilises both 5" and 8" MEMS wafer production lines in its own foundry facilities.



- All the advantages of electromechanical relays (initial CR of 1.0 Ohm)
- Dimensions: 5.2 × 3.0 × 1.8mm / LGA12
- Two contact sets with independent operation of the signal paths (1FormC or 2FormA)
- Life Expectancy Rating: 100 Million Operations
- Testing beyond 1 Billion Operations
- Power consumption: 10μW max
- Excellent frequency characteristics up to a rated bandwidth of 8 GHz, 10 GHz typical
- High linearity (low distortion)
- Very low insertion loss (1dB)
- High isolation (30dB)
- High-speed operation (100μs max)
- RoHS Compliant



Specifications
Part Number: 2SMES-01

Load	Resistive Load
Rated Load	0.5mA at 0.5VDC
Rated Carry Current	100mA at 10VDC, RF: 30dBm
Max. Switching Voltage	0.5VDC
Max. Switching Current	0.5mADC
Max. Switching Capacity	0.25mW

Load	2GHz	8GHz	12GHz
Isolation	-	30dB	-
Insertion Loss	-	1dB	3dB
Return Loss	-	10dB	-
Max. Peak Power	36dBm	-	-
Max. Carry Power	30dBm	-	-

Notes:

1. The impedance of the measurement system is 50Ω

2. The above values are initial values

3. The values are for a load with VSWR of ≤1.2.