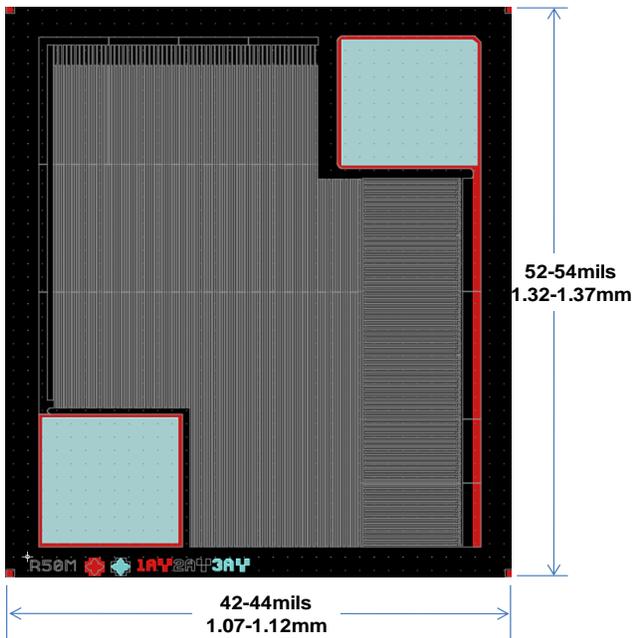


High Meg-ohm Thin Film Silicon Resistor Chip

OnChip Devices' XTM Silicon Chip is a miniature thin film resistor offering a very high Meg Ohm resistance with a range from 5Meg-ohms to 150Meg-ohms and tolerances as tight as $\pm 1\%$. The typical die size is 44 mils x 54 mils with a thickness of 10 mils. This design offers very large dual bond pads (13 x 13 mils sq) for ease of wire-bonding. The product is built on 5" wafers and can be shipped either as a whole wafer or diced and mounted on the saw mylar/tape or in Waffle Packs/GelPaks.

| ELECTRICAL CHARACTERISTICS | |
|---------------------------------------|------------------|
| Operating Temperature Range | -55°C to 175°C |
| Resistance Range | 5MegΩ to 150MegΩ |
| Maximum Power Rating @ 25°C | 100mW |
| Temperature Coefficient of Resistance | 500ppm/°C |



Device Format

Estimated Die Size (depending on saw blade thickness):

X = 42 to 44 mils

Y = 52 to 54 mils

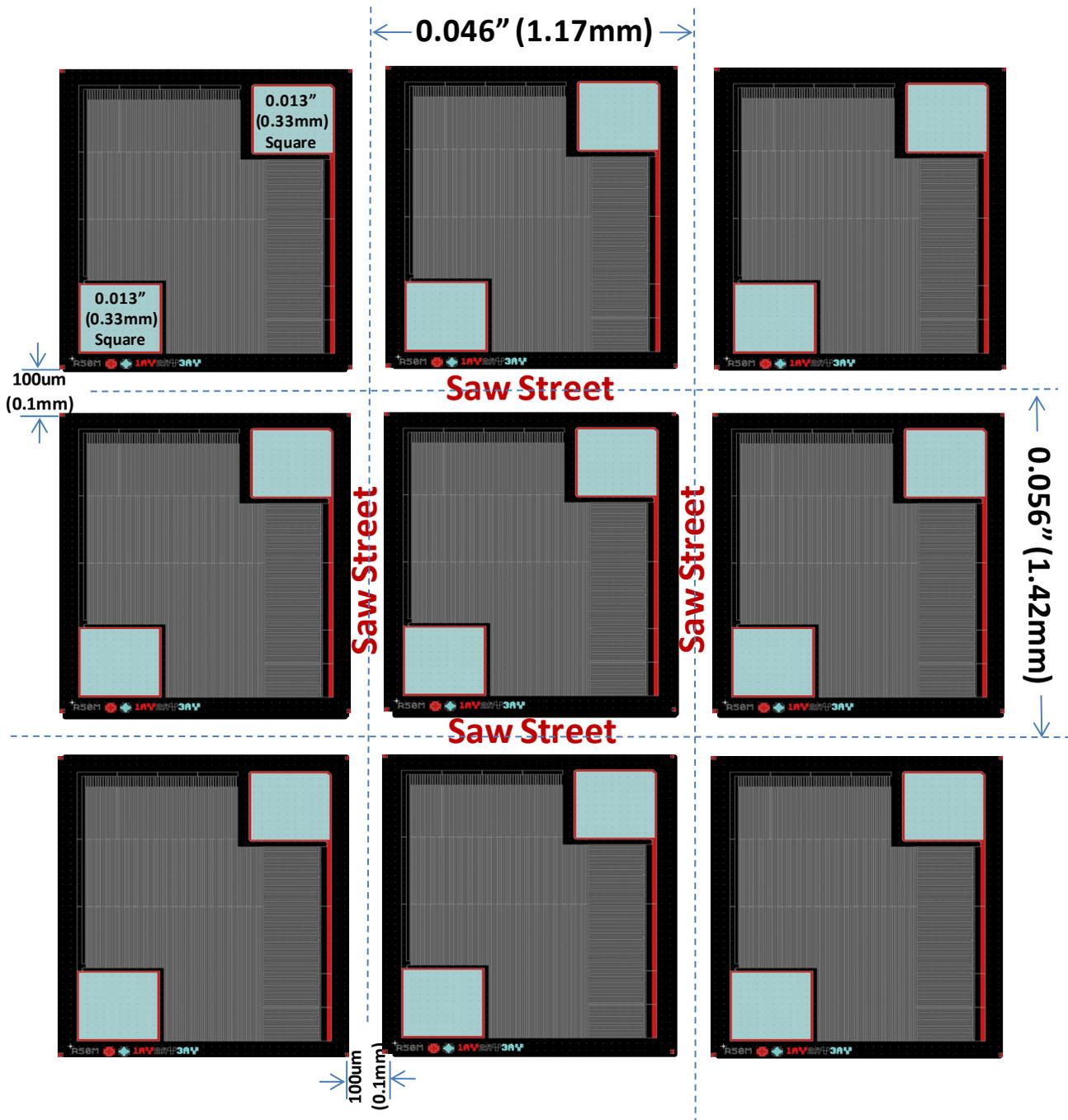
Bonding Pads: 13x13 mil sq (typical)

| Mechanical Specifications | |
|----------------------------------|---|
| Substrate | Silicon 10±2 mils thick |
| Isolation Layer | SiO ₂ 10,000Å thick, min |
| Backing | Lapped (Gold & Silver optional) |
| Pad Metalization | Aluminium 10,000Å thick, min(15,000Å gold optional) |

| Part Number Designation | | | | | |
|--------------------------------|--|---|--|-----------------------------------|--|
| XTM | 1005 | F | W | A | I |
| Product Series | Value | Tolerance | Ship Method | Front Metal Pads for Wire-bonding | Back Metal for Die Attach (Typical thickness) |
| | First 3 digits are significant value. Last digit represents number of zeros. Ex: 1005 = 10Meg and 2505 = 25Mohms | F = ±1% G = ±2% J = ±5% K = ±10% | W = Shipped as unsawn full wafer B = Diced & shipped on mylar/tape P = Waffle or GelPaks | A = Aluminum G = Gold | Blank = No Back Metal 1= Ti/Ni/Au (550A/4,000A/2,500A) 2 = Ti/Ag (550A/5,000A) |

Example Part Number: XTM5005KWA is a 50Megohm +/-10% resistor chip shipped as whole wafer; the device as Aluminum bond pads and no metal on the backside.

Resistor Chip Layout:



-  Silicon
-  Patterned Resistor Film
-  Wire-bond Pads 13 x 13 mils sq.