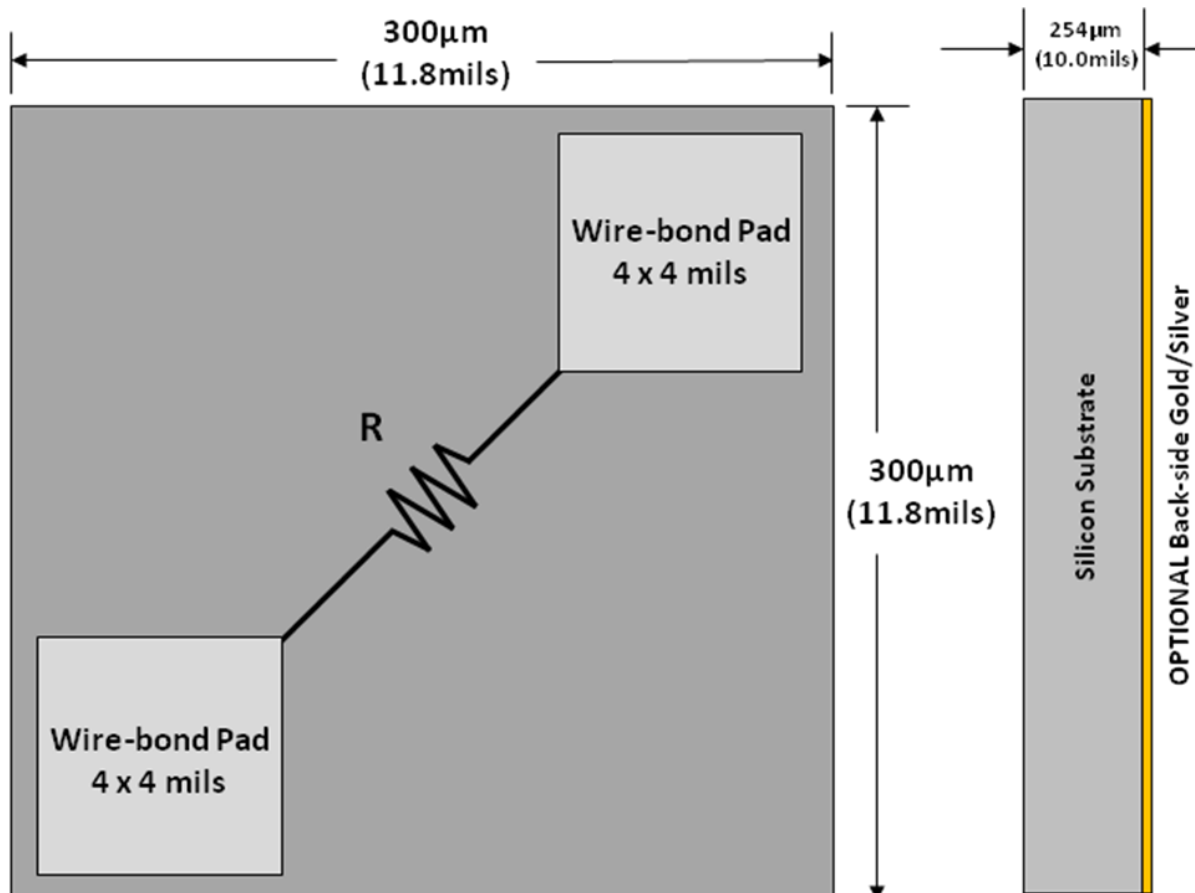


Thin Film Wire-bondable Silicon Resistor Chip

OnChip Devices' DR1212 is a miniature wire-bondable silicon resistor with a chip size of approximately 12mils x 12mils. This silicon device is built using Tantalum Nitride resistor film which offers high degree of stability, extremely low Temperature Coefficient of Resistance and exceptionally low noise.

ELECTRICAL CHARACTERISTICS	
Parameter	Condition
Operating Temperature Range	-55°C to 150°C
Resistance	33Ω to 10kΩ
Resistance Tolerance at 25°C	±5%, ±10%, ±15%, ±20%
Maximum Power Rating @ 25°C	250mW
Temperature Coefficient of Resistance	±100ppm/°C
Voltage Rating	100V
Maximum Shunt Capacitance	0.5pF

Device Layout



OBJECTIVE DATA SHEET

OnChip

DR1212

MECHANICAL SPECIFICATIONS	
Resistive Film	Tantalum Nitride
Substrate Material	Silicon
Isolation Layer	1um (Minimum) Silicon dioxide
Bonding Pads	2um (Minimum) Al/Si/Cu [Gold optional]
Bond Pad Size	4 x 4 mils sq.
Back Metal	None [Gold or Silver optional]
Passivation Layer	Tantalum pentoxide
Die Size	300um x 300um (11.8 x 11.8 mils sq.)
Saw Street	50um (1.97mils)
Wafer Diameter	5"
Wafer Thickness (Unlapped)	625um ± 25um (24.6mils ± 1 mil)
Wafer Thickness (Lapped)	254um ± 25um (10.0 mils ± 1 mil)

Packaging: Products will be shipped either in waffle or Gelpak or diced on Mylar tape or as unsawn 5" wafers in plastic boxes with sufficient protection to avoid breakage during shipping.

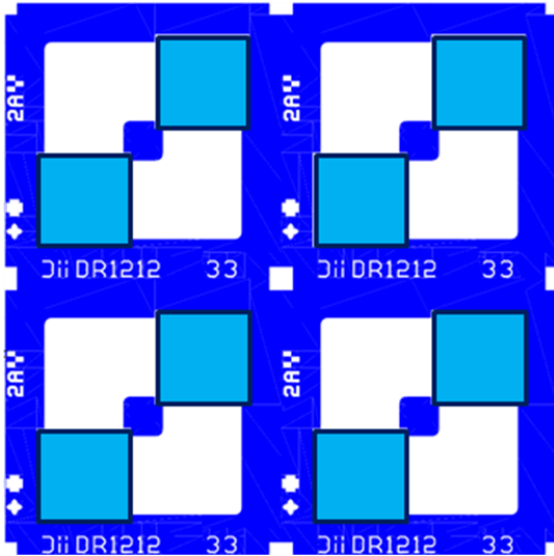
Ordering Part Number						
Resistor Series	Value*	Tolerance	Package Type	Front Metal	Back Metal	Lapping
DR1212	33R0 = 33Ω	J = ±5%	W = Unsawn 5" Wafer	A = Al/Si/Cu	1 = Ti/Ni/Au	No Letter = Unlapped
	1000 = 100Ω	K = ±10%	B = Diced and shipped on Mylar/tape	G = Gold	2 = Ti/Ag	L = Lapped
	1001 = 1,000Ω	N = ±15%	P = Diced and shipped in Gelpak		5 = None	
	1002 = 10,000Ω	M = ±20%				

*R indicates decimal place. Last digit represents number of trailing zeros.

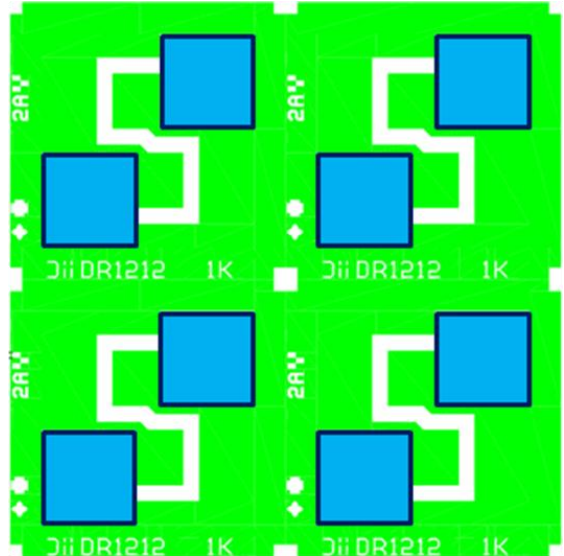
Part Number Sample:

DR1212-1002KWA2L is a 10kΩ ± 10% resistor with Al/Si/Cu front metal and Ti/Ag back metal, shipped on a lapped unsawn 5" wafer.

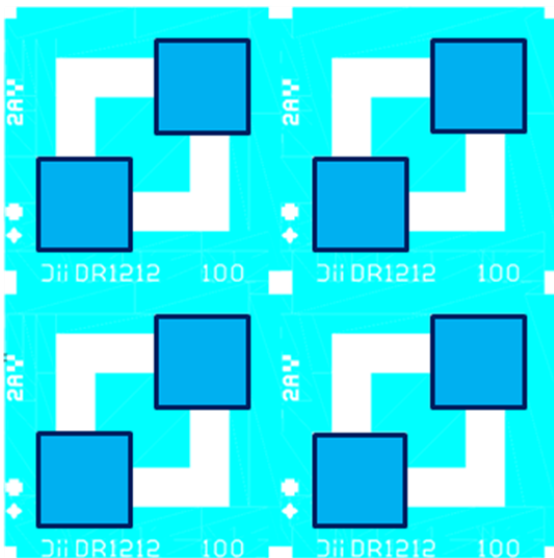
Resistor Layout: (Shown as a 2 x 2 Array)



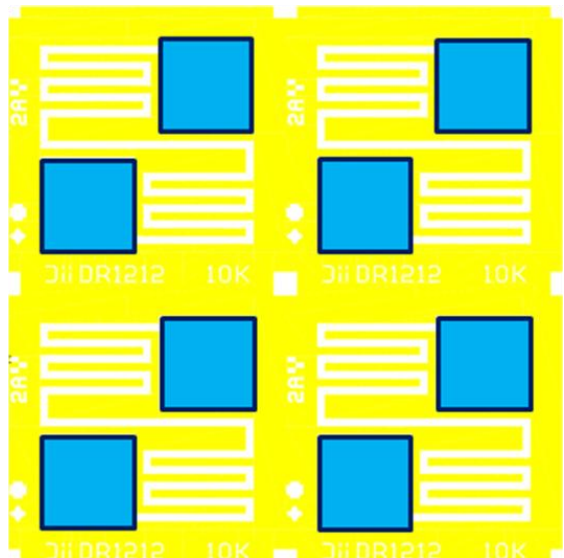
33Ω Layout



1,000Ω Layout

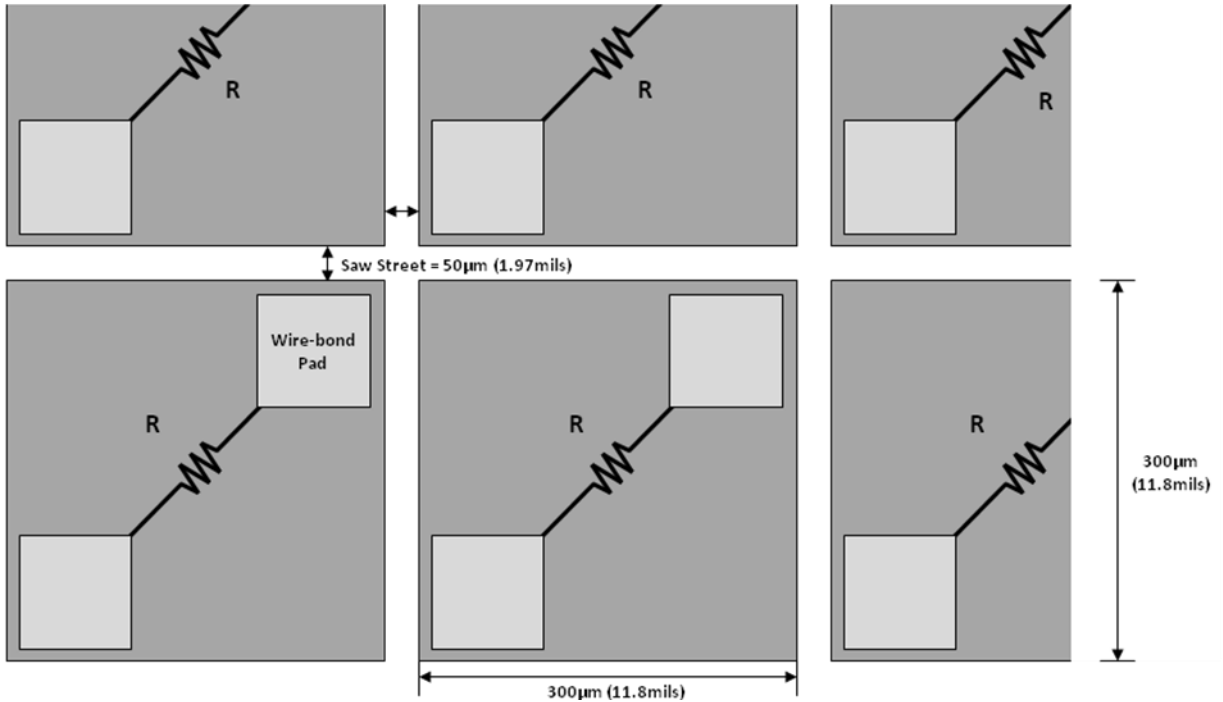


100Ω Layout



10,000Ω Layout

Wafer Array: Saw step size is $350\mu\text{m} \times 350\mu\text{m}$ (13.8 mils x 13.8 mils)



This document supersedes all previous versions and revisions of this specification.

Please contact the factory for additional details on this product.