

OBJECTIVE DATA SHEET

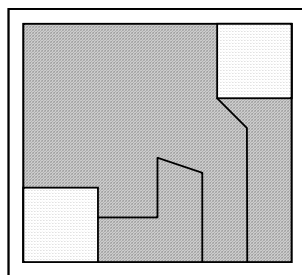
OnChip

TL

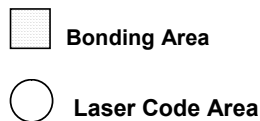
Thin Film Resistor Series

OnChip Devices' TL series resistors offer the proven stability, low noise and excellent TCR of Tantalum Nitride. TL Series 20 mil resistor chips are available in resistance values from 10 ohms to one meg ohm and in tolerances as low as 0.5%.

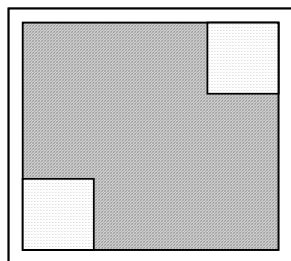
Electrical Specifications			
Parameter	Conditions		
Temperature Coefficient of Resistance	-55°C to 125°C	±100ppm/°C	Max
Operating Voltage	-55°C to 125°C	100Vdc	Max
Power Rating (per resistor)	@ 70°C (Derate linearly to zero @ 150°C)	250mw	Max
Thermal Shock	Method 107 MIL-STD-202F	±0.5% @ΔR	Max
High Temperature Exposure	100 Hrs @ 150°C Ambient	±0.25% ΔR	Max
Moisture Resistance	Method 106 MIL-STD-202F	±0.5% ΔR	Max
Life	Method 108 MIL-STD-202F (125°C/1000 hr)	±0.5% ΔR	Max
Noise	Method 308 MIL-STD-202F upto 250 KΩ	-35dB	Max
	≥250 KΩ	-20dB	
Insulation Resistance	@ 25°C	1 x 10 ¹² Ω	Min



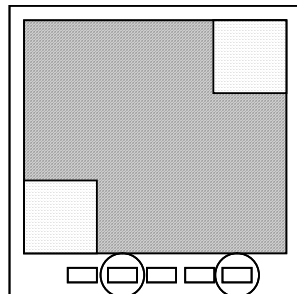
10Ω to 470Ω



Formats
 Die Size: 20±3 mils square
 Bonding Pads: 4x4 mils typical



470Ω to 47KΩ



47KΩ to 1MΩ

Values
From 10Ω to 1 meg Ω for each resistor.

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

Packaging
Two inch square trays of 400 chips maximum is standard.

Notes
1. Resistor pattern may vary from one value to another.

Part Number Designation					
TL	1002	F	A	G	W
Series	Value	Tolerance*	TCR	Bond Pads	Backing
	First 3 digits are significant value.	D = ±0.5%	No letter = ±100ppm>10Ω	G = Gold	W = Gold
	Last digit represents number of zeros.	F = ±1%	A = ±50ppm>100Ω	No Letter = Aluminium	L = Lapped
	R indicates decimal point.	G = ±2%	B = ±25ppm>100Ω		No Letter = Either
		J = ±5%			
		K = ±10%			
		M = ±20%			