

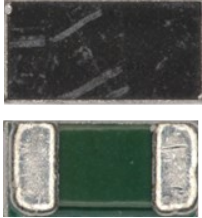


Thin Film Technology Corp.

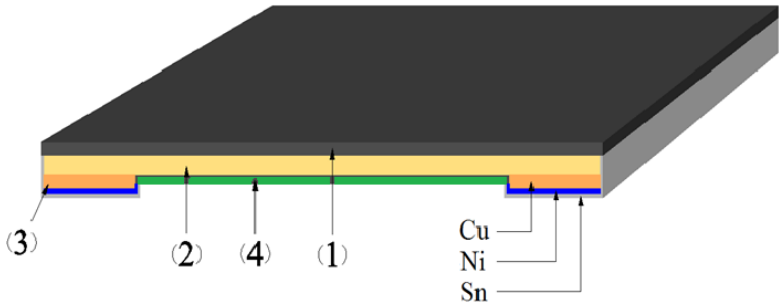
Product Family: High Current Jumper

Part Number Series: D1LPC0100-D Series



	<p>Construction:</p> <ul style="list-style-type: none"> • Cu alloy metal foil • Epoxy-resin overcoat • Non-wrapped terminations • 100% matte tin over Ni terminations • Halogen Free • RoHS compliant and Pb free • Inherently Anti-Sulfur 	<p>Features:</p> <ul style="list-style-type: none"> • 01005 English Case Size • Max current of 8 Amps • Resistance of 2mΩ max • Low profile of 0.15mm max • Moisture Sensitivity Level (MSL) = 1
<p>Description:</p> <p>These high current, metal foil, jumper chip resistors exhibit excellent performance with a very low height profile. They are useful in many jumper applications where high current withstand and high durability are required.</p>		

Product Construction:

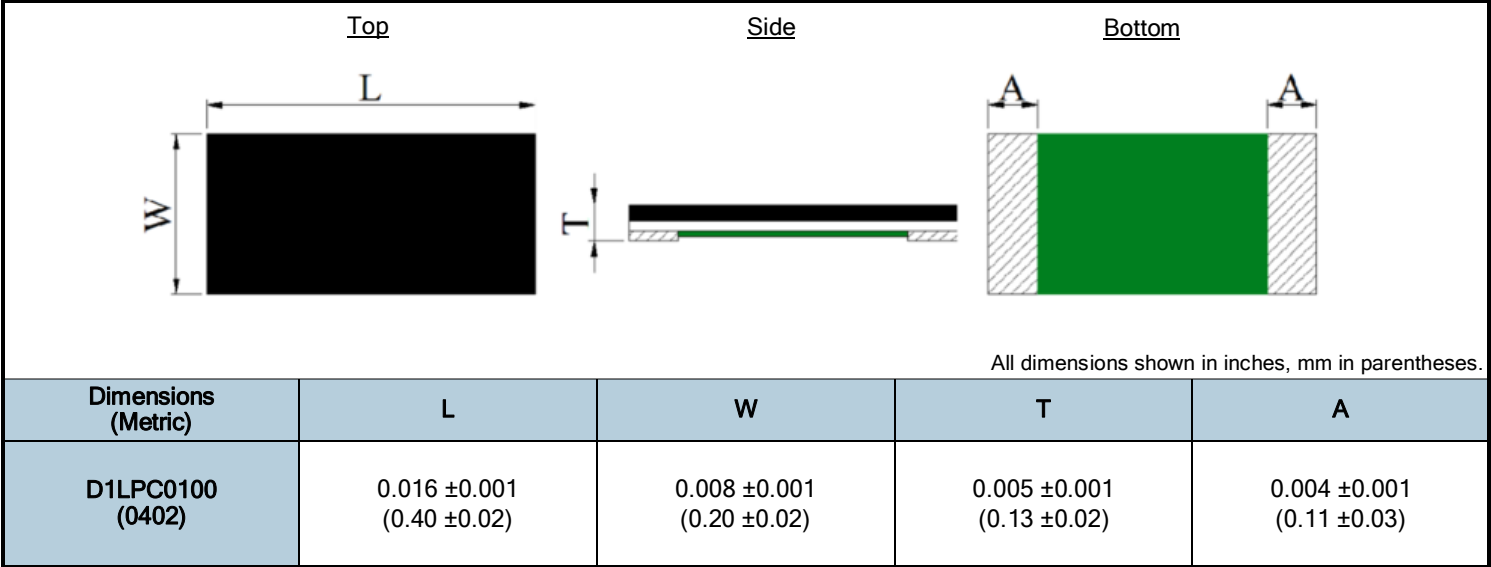
	Number	Description
	1	Substrate (glass epoxy)
	2	Resistor film (Cu alloy)
	3	Terminals (100% matte Sn)
	4	Protective coating (epoxy resin)

Part Numbering: D1LPC0100CJUMPFD-T20

Series Name	English Size (Metric Size)	Jumper Element	Resistance Value	Serial Code	Internal Code	T&R Packaging Quantity
D1LPC	0100* (0402)	C = Cu Alloy	JUMP = Jumper, 0Ω	F = Face Down	D	-T20 = 20,000 pcs/reel

* English case size "01005" is shortened to "0100" for the case size code. See actual dimensions in the Product Dimensions table.

Product Dimensions:

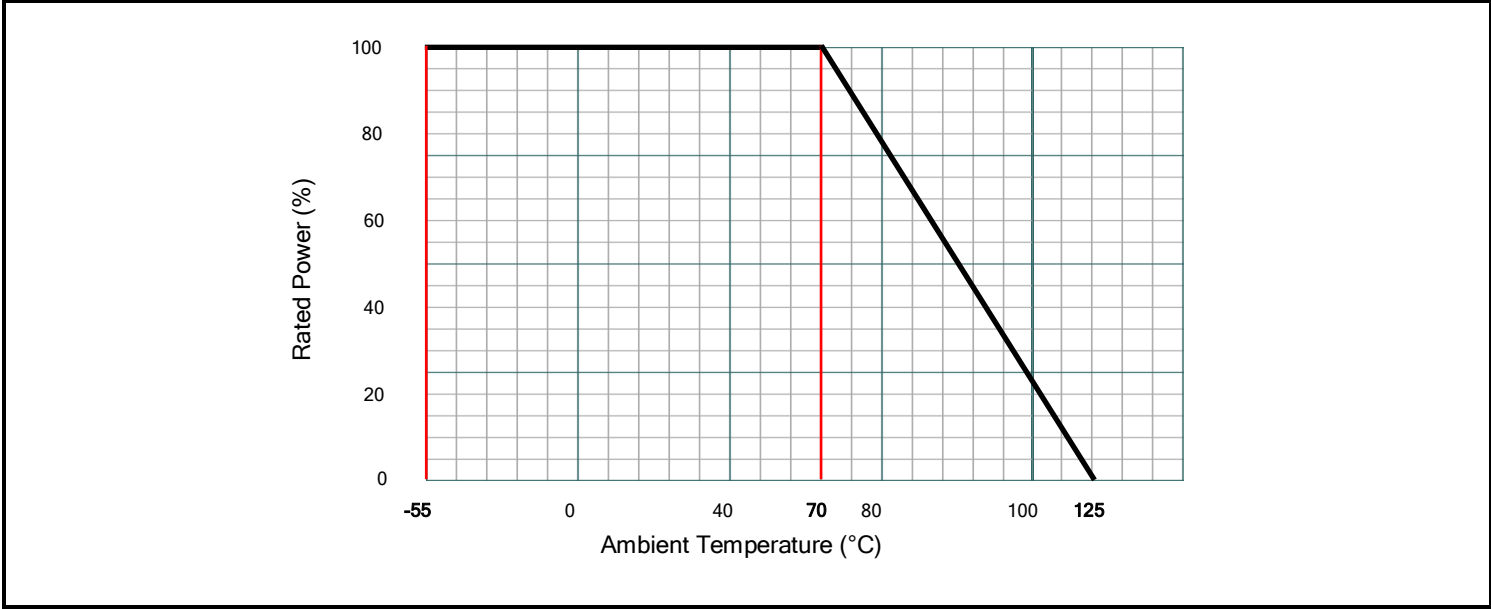


Electrical Specifications:

Type	D1LPC0100*
English Size	01005
Metric Size	0402
Resistance	Max 2mΩ
Max Current	8 Amps
Operating Temp. Range	-55°C ~+125°C
Packaging (code)	20,000/reel (-T20)

* English case size "01005" is shortened to "0100" for the case size code. See actual dimensions in the Product Dimensions table.

Power Derating Curve:

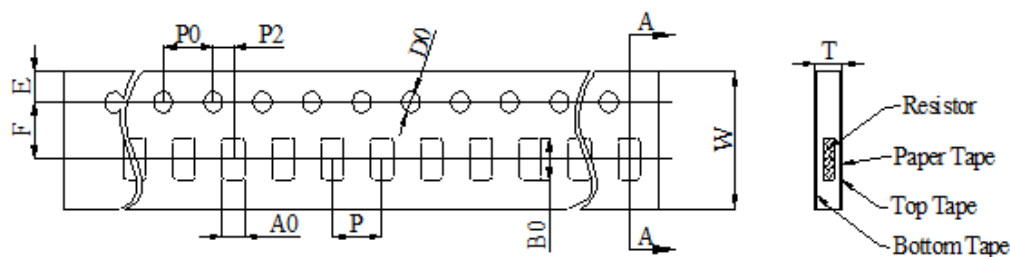


Reliability Specifications:

Test	Test Method	Specification
Resistance Data	Resistance data at 25°C	Must meet datasheet requirements
Dimensional Data	Measure all dimensions specified in datasheet	Must meet datasheet requirements
Short Time Overload (1) JIS-C-5201, 4.13	Applied voltage: 2.5X rated voltage. Test duration: 5 seconds	$R \leq 2.0$ mohm Parts must meet initial specifications following testing.
Load Life, Power Cycling (1) JIS-C-5201-1, 4.25	Test Temperature: 70°C Applied voltage: rated power Test period: 1,000 hours with power cycling as follows: 90 min. power ON/30 min. power OFF,	$R \leq 2.0$ mohm Parts must meet initial specifications following testing.
Temperature / Humidity (1) JIS-C-5201-1, 4.24	Test Condition: 60°C/90-95% RH Test period: 1,000 hours	$R \leq 2.0$ mohm Parts must meet initial specifications following testing.
Temperature Cycle (1) (Thermal Shock) JESD22-A-104	Repeat 1,000 cycles as follows: -55°C (30 min.) / +125°C (30 min.) Transition time of 1 minute maximum	$R \leq 2.0$ mohm Parts must meet initial specifications following testing.
Resistance To Solder Heat #1 J-STD-020	One reflow cycle according to JEDEC J-STD-020, cool down then parts are immersed into a molten solder bath with a temperature of 260°C for a period of 10 ±1 seconds.	$R \leq 2.0$ mohm Parts must meet initial specifications following testing.
Resistance To Solder Heat #2 J-STD-020	Per component MSL classification per J-STD-020 3 reflow cycles	$R \leq 2.0$ mohm Parts must meet initial specifications following testing.
Terminal Strength AEC-Q200-006	Test Force: 2.5N Duration: 60 ±1 seconds Parts must be soldered onto a PCB to perform test	$R \leq 2.0$ mohm Parts must meet initial specifications following testing.
Flex Strength	Board Flex: Span 90mm, Flex of 2mm Test Duration: 10 seconds	$R \leq 2.0$ mohm Parts must meet initial specifications following testing.
Vibration (1) MIL-STD-202, Method 204, Condition B	Frequency: 10 - 2,000Hz Acceleration: 15G Test Duration: 20 mins / 12 Cycles	$R \leq 2.0$ mohm Parts must meet initial specifications following testing.
Mechanical Shock (1) MIL-STD-202, Method 213, Condition A	Force: 50G Test Duration: 11 ±1 milliseconds	$R \leq 2.0$ mohm Parts must meet initial specifications following testing.
Solderability MIL-STD-202, Method 208H, Category 3	Dipped into molten solder for 3 ±1 seconds at 245°C Flux activity type R0	New solder coverage of 95% minimum
Pre-Conditioning	Per component MSL classification per J-STD-020 3 reflow cycles	N/A

Note: (1) Samples shall be from the pre-conditioned group

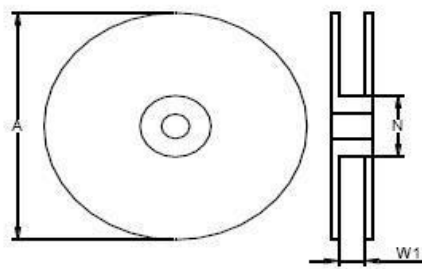
Paper Tape Dimensions:



All dimensions in mm.

Type	W	P0	P	P2	A0	B0	D0	F	E	T
D1LPC0100	8.00 ±0.10	4.00 ±0.05	4.00 ±0.05	2.00 ±0.05	0.25 ±0.03	0.45 ±0.03	1.55 ±0.05	3.50 ±0.05	1.75 ±0.05	0.31 ±0.03

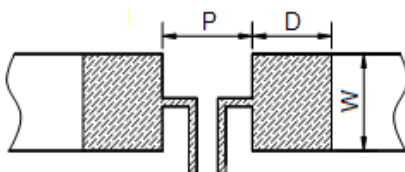
Reel Dimensions:



Dimensions are in mm.

Type	A	N	W1
D1LPC0100	178 ±5.00	60.0 ±2.00	9.00 ±1.00

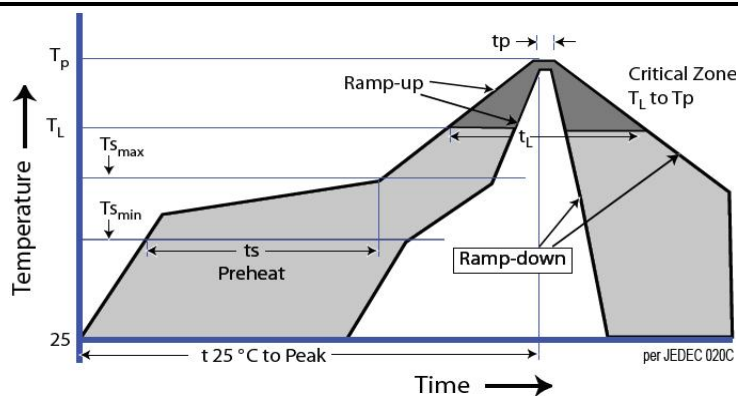
Recommended Land Pattern:



Dimensions are in mm.

Type	P	W	D
D1LPC0100	0.15	0.30	0.20

Soldering Profile:



Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate ($T_{s_{max}}$ to T_p)	3 °C/second max.
Preheat	
- Temperature Min ($T_{s_{min}}$)	150 °C
- Temperature Max ($T_{s_{max}}$)	200 °C
- Time ($t_{s_{min}}$ to $t_{s_{max}}$)	60-180 seconds
Time maintained above:	
- Temperature (T_l)	217 °C
- Time (t_l)	60-150 seconds
Peak Temperature (T_p)	260 ±0 °C
Time within 5 °C of actual Peak Temperature (t_p)	20-40 seconds
Ramp-Down Rate	6 °C/second max.
Time 25 °C to Peak Temperature	8 minutes max.

Storage Conditions:

Environment Conditions:

Products should be stored under the following environmental conditions.

- Temperature: +5 to +35°C
- Humidity: 45 to 85% relative humidity
- Do not keep products in environments where they may be subject to particulate contamination or harmful gases such as sulfuric acid or hydrogen chloride as it may cause oxidization on electrodes, resulting in poor solderability.
- Products should be stored in a space that does not expose it to high temperatures, vibration, or direct sunlight.
- Products should be stored in the original airtight packaging until use.