

**Type 3103 Series**



The latest miniaturised sealed trimmer from Citec is the smallest, lightest sealed potentiometer available and the most cost effective. Consuming just 10.5mm<sup>2</sup> of board real estate, it has been developed specifically for new generation hand held equipment, where double sided component placement is often unavoidable. These 3mm devices are only 1.8mm high. Due to the innovative carbon on polymer technology, the device sets new standards in low cost high reliability electro mechanical components.

**Key Features**

- **Tiny 3mm Square Size**
- **Latest Carbon Polymer Technology**
- **Suitable For Washing**
- **Delta Terminals Prevent Solder Bridging**
- **Super Thin - Less Than 2mm High**
- **Packed in 8mm Standard Plastic Tape**
- **Integrated End Stop**

**SMD Economy Trimmers**

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**Characteristics - Electrical**

<b>Resistance Range:</b>	200R to 1M
<b>Resistance Values:</b>	1, 2, 5 in each decade
<b>Resistance Tolerance:</b>	± 30%
<b>Temperature Coefficient of Resistance:</b>	± 500ppm / °C (25 to 85°C) ± 750ppm / °C (-25 to 25°C)
<b>Resistance Law:</b>	Linear
<b>Max. Operating Voltage:</b>	50V dc
<b>Contact Resistance Variation:</b>	5% of Nominal Max.
<b>Power Rating:</b>	0.05W at 50°C
<b>Effective Electrical Angle:</b>	260° ± 20°

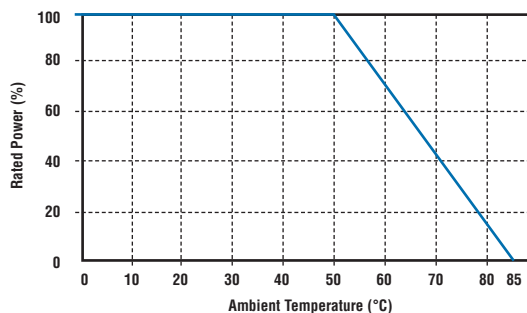
**Characteristics - Mechanical**

<b>Rotational Torque:</b>	1 to 15 mNm
<b>Adjustment (End Stop Torque):</b>	20 mNm
<b>Weight:</b>	0.09 grams
<b>Terminal Robustness:</b>	Horizontal 10 N Vertical 5 N

**Characteristics - Environmental**

<b>Temperature Range:</b>	- 25°C to 70°C
<b>Rotational Life:</b>	After 20 cycles ΔR ± 15%
<b>Load Life:</b>	ΔR Within + 2%, -15% after 500 hrs at 50°C Under Load
<b>Sealing:</b>	Dustproof - Suitable for Washing
<b>Humidity Load Life:</b>	ΔR -10%, +15% after 500 hrs at 40°C, RH 90 to 95%, Under Load

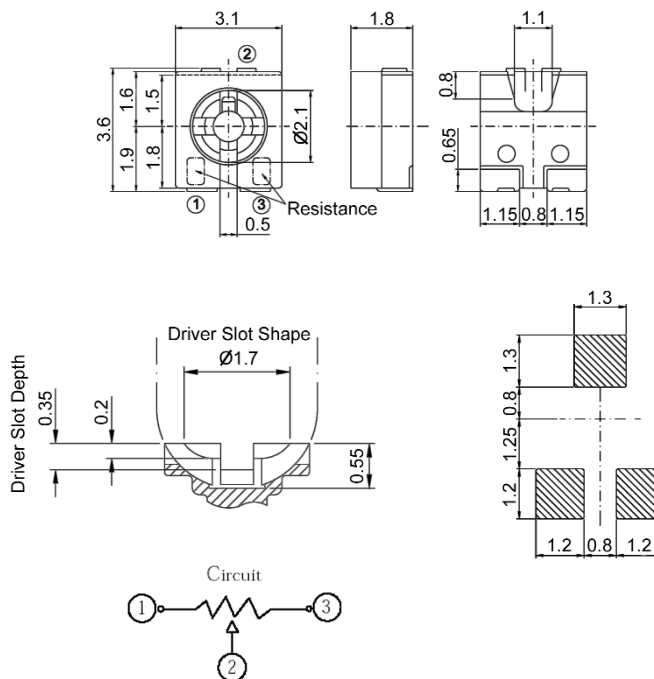
**Derating Curve**



When the ambient temperature exceeds 50°C, reduce the rated power and current in accordance with the derating curve shown

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**Dimensions**



**Ambient Temperature**

Care must be taken with regard to ambient temperature of potentiometers. Load should be derated in accordance with specified derating curve, at high temperatures.

**Anode Oxidation**

When D.C. current is used and the trimmer is to remain in one set position for a long period, it is good practice to connect the negative line to the resistance element and the positive line to the wiper terminal. With the polarity reversed, particularly in moist conditions, it is possible for surface oxidation of the contact to cause a resistance increase.

**Storage**

For maximum possible shelf life do not disturb polythene sleeve until you are ready to use.

**How to Order**

3103	X	502	N
<b>Common Part</b>	<b>Orientation</b>	<b>Resistance Value</b>	<b>Tolerance</b>
3mm Sealed Trimmer	X - Terminals 1 and 3 away from the sprocket holes	The first two digits are significant figures of resistance value and the third denotes the number of zeros following.  e.g. 1K: 102 5K: 502 100K: 104	N - 30 %