

ISSUE DATE 16.12.98	EFFECTIVE DATE 10.04.2012	SECTION Resistor Metal Oxide	QC
SUPERSEDES Rev. 7		TOPIC UXP - Resistors	160
WRITTEN BY Kf	CHECKED BY Pr	SUBJECT Mounting of UXP / UPT / ULX	.0
APPROVED Kf			

1) Mounting surface:

It is important to keep the mounting surface (heat sink) free of any lacquer, varnish, solvent and dust. The flatness of the cooling plate must be better than 0.05mm overall. The roughness of the surface should not exceed 6.4µm. Mounting boreholes of heatsink should be realized as described in our product-catalogue. The groundplate of the resistor must be controlled for any residues of used packing material.

2) Thermal transfer compound:

The easiest way to apply the thermal transfer compound on to the bottom case of the UXP / UPT / ULX resistor is to use a rubber roller in the same way as offset–printing is done.

First the thermal compound has to be apportioned in all directions on a flat plate (something like a ceramic- or steelplate) with the roller. About 25ml of the thermal grease should be used for 100 pcs. of UXP / UPT / ULX resistors.

By apportioning the compound on the plate a thin film of the thermal transfer compound will remain on the roller. This thin film has to be rolled on the bottom case of the resistor in all directions in a way that a thin layer of the compound remains on the resistor case.

We recommend to use thermal grease with no electrical conductivity and which is free of silicone.

It is very important that the case is completely covered with the thermal grease, but it is also important that the compound is not apportioned too thick!

Suggested thickness of thermal grease: 0,05 to 0,08mm

3) Mounting of the elements:

The resistor element with the applied thermal compound has to be put on with slight pressure on the mounting surface (heat sink). By moving the element back and forth the resistor should be positioned that on the one hand the surplus of the thermal compound is separated (squeezed out at the sides) and on the other hand the mounting holes of the elements are exactly above the provided bore-holes of the mounting plate.

The purpose of this procedure is that there remains just the right quantity of thermal compound between bottom case of the resistor and heat sink to avoid air bubbles, but it also ensures that there is at least one direct contact between case and heat sink. This contact is important, because otherwise the partial discharge measurement can be falsified.

As a last step the two mounting screws have to be fixed with the torque according to the data sheet (1,8Nm). We suggest to fix both screws with 0,5Nm first, further with a torque of 1,8Nm.

This procedure ensures that the thermal grease is almost apportioned even!

Mounting torque for terminal screws is 2Nm. (not valid for ULX)