



# APPROVAL SHEET

## UPRNS32SF3D6T

## 99.9M/100k

MOLD TYPE ULTRA PRECISION

VOLTAGE DIVIDER RATIO 1000:1

PRODUCE	CHECK AND APPROVED	ACCEPTED BY
EM	CE	HONORABLE CUSTOMER
Edison Chen	Charles Chen	
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## 1. PRODUCT:

ULTRA-PRECISION METAL FILM VOLTAGE DIVIDERS, MOLD TYPE

## 2. PART NUMBER:

Part number is identified by the series name, number of leads, number of resistors, layout profile, tolerance, temperature coefficient, match Tol. and match TCR, packing type and resistance values.

For Example:

UPRNS	3	2	S	F	3	D	6	T	99951003
Series Name	Number of Leads	Number of Resistors	Layout	Tol.	TCR	Match Tol.	Match TCR	Packing	Resistances

- (1) Series name: UPRNS
- (2) Number of the leads: 3 pins
- (3) Number of resistors: 2 pcs 99.9M/100k
- (4) S: resistors are series connected inside
- (5) Tolerance: F=±1.0%;
- (6) TCR : 3=±25ppm/°C;
- (7) Match Tol. D=±0.5%
- (8) Match TCR 6=±10ppm/°C;
- (9) Packing: T= tube/box
- (10) Resistance value: see electric characteristics 9995=99.9M, 1003=100k

## 3. Marking:

Digital marking with part number and batch number and lot number



## 4. ELECTRICAL CHARACTERISTICS

Types	UPRNS32SF3D6T99951003	型号
Standard applied	Q/SLC018-2011	技术标准
Cross to CADDOCK's type	THV10	替代CADDOCK公司的产品型号
Tolerance	F( $\pm 1.0\%$ )	精度
Temperature coefficient	3( $\pm 30\text{ppm}/^\circ\text{C}$ )	温度系数
Ratio tolerance	D( $\pm 0.5\%$ )	匹配精度
Ratio temperature coefficient	6( $\pm 10\text{ppm}/^\circ\text{C}$ )	匹配温度系数
Voltage divider ratio	$(R_1+R_2):R_2=1000:1$	电压分压比
Max. operating voltage $U_{max}$	10,000V <sub>DC</sub>	$U_{max}$ 最大工作电压
Failure rate	$\leq 10^{-8}/\text{h}$	失效率
Dimension		外观尺寸

\* Unless otherwise specified, all values are tested at the following condition:

Temperature: 21°C to 25°C; Relative humidity: 45% to 60%

\*  $R_1+R_2=99.9\text{M}+100\text{k}=100\text{M}=1006$  meet the requirement of final tolerance  $\pm 1.0\%$

\*  $(R_1+R_2)/R_2=1000:1$  meet the requirement of match tolerance  $\pm 0.50\%$



## 5. ENVIRONMENTAL CHARACTERISTICS

### (1) Temperature Coefficient Test

IEC 60115-1, 4.8: Test of resistors at room temperature and 60°C above the room temperature. Then measure the resistance. The Temperature Coefficient is calculated by the following equation and its value should be within the range requested.

$$\text{Resistor Temperature Coefficient} = \frac{R - R_0}{R_0} \times \frac{1}{t - t_0} \times 10^6$$

R = Resistance value under the testing temperature

R<sub>0</sub> = Resistance value at the room temperature

t = the 2<sup>nd</sup> testing temperature

t<sub>0</sub> = Room temperature

### (2) Short Time Overload Test

IEC60115-1 4.13: Applied at 6 times power rating voltage for 5 seconds, the resistor should be free from defects. The change of the resistance value should be within ±(0.1%) compared with the value before the test.

### (3) Solderability

IEC 60115-1, 4.17: 235±5°C for 3±0.5 Seconds, there are at least 95% solder coverage on the termination.

### (4) Damp Heat Steady State

IEC 60115-1, 4.24: 40±2°C, 90-95% RH for 56 days, loaded with 0.1 times RCWV or the maximum working voltage whichever is lower. The change of the resistance value should be within ± (0.5%) compared with the value before the load.

### (5) Load Life Test

IEC 60115-1, 4.25: 70±2°C at 10,000V for 1,000+48/-0 Hr. (1.5Hr. on, 0.5Hr. off). The resistors shall be arranged not much effected mutually by the temperature of others and the excessive ventilation shall not be performed. The change of the resistance value should be within ± (0.5%) compared with the value before the load.



## Disclaimer

*All products, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise.*

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