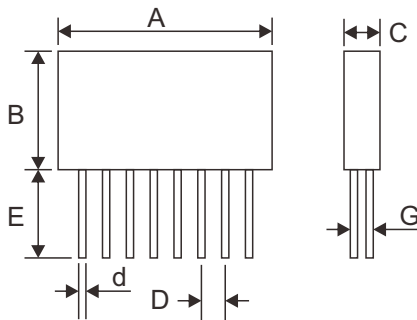




## ● Features

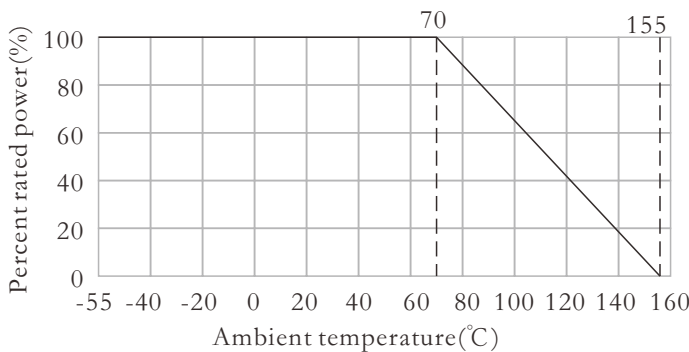
- I Come up to GB/T5729-2003
- II High stability:  $\pm 0.5\%$  70°C 1000h
- III Temp range : -55°C ~ 155°C
- IV High precision
- V Low TCR
- VI Good tracking

## ● Dimensions

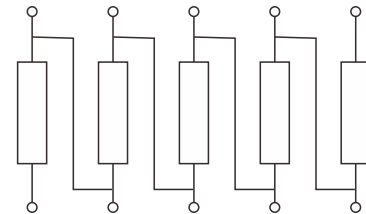


Dimensions(mm)						
A	B	C	D	E	d	G
10~50	9~12	$\geq 6.5$	$\geq 2.54$	$10 \pm 0.5$	$0.60 \pm 0.05$	$\geq 2.54$

## ● Derating curve



## ● Examples for internal circuit



## ● Reference Standards

JISC 5201-1

## ● Ordering Information

Example:

UPRN-D	F	10R00	C3
(1)	(3)	(4)	(5)
Series Name	Resistance Tolerance	Resistance	T.C.R

(1) Series Name: UPRN-D

(2) Resistance Tolerance: P ( $\pm 0.02\%$ ), W ( $\pm 0.05\%$ ) B =  $\pm 0.1\%$ , C =  $\pm 0.25\%$ , D =  $\pm 0.5\%$ , F =  $\pm 1.0\%$

(3) Resistance: 0R100 = 0.1Ω, 0R220 = 0.22Ω, 10R00 = 10Ω, 1M000 = 1MΩ

(4) T.C.R: C7 =  $\pm 5\%$  PPM/°C, C6 =  $\pm 10\%$  PPM/°C, C5 =  $\pm 15\%$  PPM/°C, C4 =  $\pm 20\%$  PPM/°C,

C3 =  $\pm 25\%$  PPM/°C, C2 =  $\pm 50\%$  PPM/°C

## ● Applications And Ratings

Type	Power rating at 70°C (W)	Limiting element voltage (V)	Resistance range ( $\Omega$ )	Tolerance range	Relative precision	TCR (PPM/°C)	Relative TCR (PPM/°C)
UPRN-D	0.125W	200V	5R~10R	P( $\pm 0.02\%$ )		$\pm 5$	2~10
			10R~250R	W( $\pm 0.05\%$ )	L( $\pm 0.01\%$ )	$\pm 10$	
			250R~500K	B( $\pm 0.1\%$ )	P( $\pm 0.02\%$ )	$\pm 15$	
			500K~1M0	C( $\pm 0.25\%$ )	W( $\pm 0.05\%$ )	$\pm 20$	5~10
			1M0~2M0	D( $\pm 0.5\%$ )	B( $\pm 0.1\%$ )	$\pm 25$	
			2M0~10M0	F( $\pm 1.0\%$ )		$\pm 50$	

## ● Performance

Test items	Performance requirements	Test methods(JIS C 5201-1)
Short time overload	$\leq \pm (0.1\%R + 0.01\Omega)$	2.5 times rated voltage, 5S
Temperature shock	$\leq \pm (0.1\%R + 0.01\Omega)$	-55°C ~ 155°C, 5 cycles, 0.5h
Dielectric strength	$\leq \pm (0.1\%R + 0.01\Omega)$	450V, 1min, 100V/S
Resistance to solder	$\leq \pm (0.1\%R + 0.01\Omega)$	260°C, 10S
Load life	$\leq \pm (0.5\%R + 0.05\Omega)$	70°C, Pe, 1000h
Vibration	$\leq \pm (0.1\%R + 0.01\Omega)$	0~500Hz, 0.75mm, 98/S <sup>2</sup>