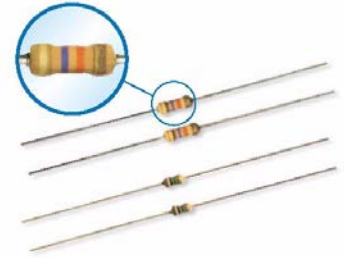


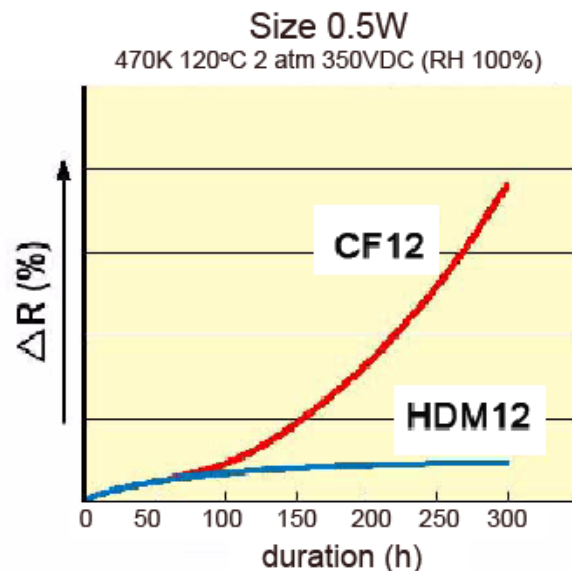
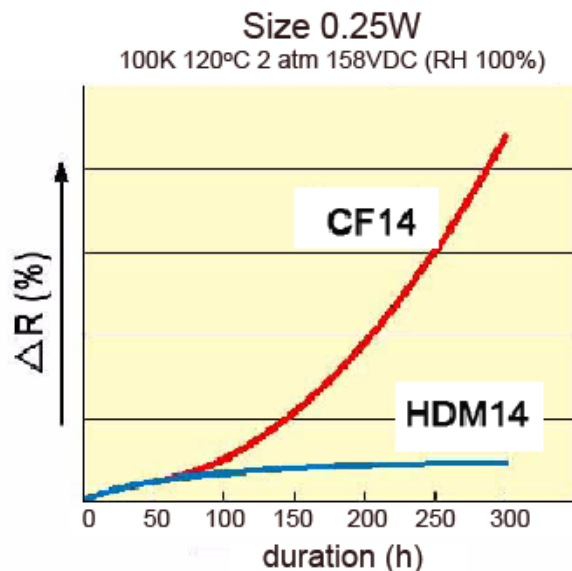
- Features:
- Specialized materials, processes and controls ensure a part that is impervious to moisture
  - Small size with high power density
  - Auto sequencing / insertion capable
  - Low cost replacement in many applications using metal glaze resistors
  - RoHS compliant / lead-free



Electrical Specifications				
Type/Code	Power Rating (Watts) @ 70°C	Maximum Working Voltage <sup>(1)</sup>	Maximum Overload Voltage	Ohmic Range (Ω) and Tolerance
HDM14	0.25W	300V	600V	1%, 2%, 5%
HDM12	0.5W	350V	700V	1 - 2.2M

(1) Lesser of  $\sqrt{PR}$  or maximum working voltage.

Mechanical Specifications					
Type/Code	A Body Length	B Body Diameter	C Lead Length (Bulk)	D Lead Diameter	Unit
HDM14	0.126 + 0.008 /- 0 3.20 + 0.20 /- 0	0.071 ± 0.008 1.80 ± 0.20	1.102 ± 0.118 28.00 ± 3.00	0.018 ± 0.002 0.45 ± 0.05	inches mm
HDM12	0.236 ± 0.012 6.00 ± 0.30	0.094 ± 0.008 2.40 ± 0.20	1.102 ± 0.118 28.00 ± 3.00	0.024 ± 0.001 0.60 ± 0.02	inches mm



Performance Characteristics		
Test	Performance or Quality Acceptance	Test Condition and Method
TCR - Temperature Coefficient of Resistance	$R < 100K\Omega$ : -500 ~ +350ppm/°C $100K\Omega \leq R < 1M\Omega$ : -700 ~ 0ppm/°C $R \geq 1M\Omega$ : -1500 ~ 0ppm/°C	Measure resistance ( $R_0$ ) at room temperature ( $t$ ), after that, measure again the resistance ( $R$ ) at 100°C higher than room temperature. $TCR = \frac{R-R_0}{R_0} \times \frac{10^6}{(t+100)t} \text{ (ppm/°C)}$
Overload (Short Time)	Change of resistance $\leq \pm(0.75\% + 0.05\Omega)$	Apply the 2.5 times rated voltage or max overload voltage whichever is lower for 5 seconds and leave in room temperature for one hour after test.
Damp heat (Steady State)	Change of resistance $R < 100K\Omega$ : $\leq \pm(3\% + 0.05\Omega)$ $R \geq 100K\Omega$ : $\leq \pm(5\% + 0.05\Omega)$	In the chamber having temperature $40 \pm 2^\circ\text{C}$ and relative humidity $93 \pm 3\%$ , apply one percent of the power rating, 1.5 hour ON, 0.5 hour OFF for 1000 hours and leave in room temperature for one hour after test.
Load Life	Change of resistance $R < 100K\Omega$ : $\leq \pm(2\% + 0.05\Omega)$ $R \geq 100K\Omega$ : $\leq \pm(3\% + 0.05\Omega)$	At $70 \pm 2^\circ\text{C}$ , apply rated DC voltage 1.5 hour ON, 0.5 hour OFF for 1000 hours and leave in room temperature for one hour after test.
Pressure Cooker Bias Test	Change of resistance $\leq \pm(20\% + 0.05\Omega)$	121°C, 2atm, 98-100% R.H. Apply the rated DC voltage for 100 hours.

Reference standards: JIS C5201-1, IEC60115-1

How to Order

1	2	3	4	5	6	7	8	9	10	11	
H	D	M	1	2	J	T	4	K	7	0	
Product Series		Size	Power Rating	Tolerance			Code	Description	Size	Quantity	Resistance Value
HDM	Moisture Resistant	14	0.25W	Code	Tol	E24	T	Tape and Reel	all sizes	5,000	Four characters with the multiplier used as the decimal holder.  1 ohm = 1R00 10 Kohm = 10K0 2.2 Mohm = 2M20
	Carbon Film	12	0.5W	F	1%		A	Ammo	all sizes	5,000	
				G	2%		B	Bulk	14	2,000	
			J	5%	12				1,000		