

Power Wirewound Resistors  
flame retardant, safety version



## Specifications

| Type  |                                | CRF251-4   | CRF252-4   | CRF253-4   | CRF254-4   | CRF256-4   | CRF257-4   |
|---|--------------------------------|--|------------|------------|------------|------------|------------|
| Nominal Power rating $P_{40}$<br>$P_{70}$                   | W                              | 1,1<br>1,0                                       | 2,0<br>1,6 | 2,5<br>2,0 | 3,0<br>2,5 | 4,0<br>3,5 | 5,0<br>4,3 |
| Resistance range  | $\Omega$                       | see next page<br>( higher values upon request )  |            |            |            |            |            |
| E-Series  |                                | E 24   |            |            |            |            |            |
| Tolerances  | %                              | $\pm 5$  |            |            |            |            |            |
| Temperature coefficient                                     | $10^{-6} \cdot K^{-1}$         | 120 $\pm 50$                                     |            |            |            |            |            |
| max. cont. work. voltage                                    | $V_{RMS}$                      | $\sqrt{P_{70} \cdot R}$                          |            |            |            |            |            |
| Insulation voltage (1min.)                                  | $V_{RMS}$                      | max 75V  |            |            |            |            |            |
| Insulation resistance                                       |                                | not insulated                                    |            |            |            |            |            |
| Derating linear   | $^{\circ}C$                    | 70 ... 350 (0W)                                  |            |            |            |            |            |
| Climatic category   | $\Omega$                       | 55/350/56  |            |            |            |            |            |
| Temperature range   | $^{\circ}C$                    | - 55 ... 350                                     |            |            |            |            |            |
| Thermal resistance  | $KW^{-1}$                      | 125  | 100        | 85         | 65         | 65         | 48         |
| Failure rate<br>(Total, $J_o$ , max., 60% conf. lev.)       | $10^{-9} \cdot h^{-1}$         | appr. 10, depends on value                       |            |            |            |            |            |
| Endurance<br>( $P_{70}$ , 70 $^{\circ}C$ , 1000)            | $\left[\frac{DR}{R}\right] \%$ | $\pm 5,0$ average                                |            |            |            |            |            |
| Damp heat, steady state<br>(40 $^{\circ}C$ , 93% r.h., 56d) | $\left[\frac{DR}{R}\right] \%$ | $\pm 5,0$  |            |            |            |            |            |
| Climatic sequence   | $\left[\frac{DR}{R}\right] \%$ | $\pm 2,0$  |            |            |            |            |            |
| Terminal strength   | $\left[\frac{DR}{R}\right] \%$ | $\pm 0,2$  |            |            |            |            |            |
| Terminal tensile strength                                   | N                              | 40   |            | 50         |            |            |            |
| Resistance to soldering heat<br>(260 $^{\circ}C$ , 10s)     | $\left[\frac{DR}{R}\right] \%$ | $\pm 0,5$  |            |            |            |            |            |
| Solderability   | s                              | 2,5 Flowtime, solderglobule test, IEC 60068-2-20 |            |            |            |            |            |
| Marking   |                                | printed in clear                                 |            |            |            |            |            |

Revision 200907

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| Type     | Resistance range |      |
|----------|------------------|------|
|          | min.             | max. |
| CRF251-4 | *1R0             | 100R |
| CRF252-4 | *1R0             | 240R |
| CRF253-4 | *1R0             | 330R |
| CRF254-4 | *1R0             | 330R |
| CRF256-4 | *1R0             | 330R |
| CRF257-4 | *1R0             | 330R |

Note: The special construction of resistance values >10R results in an immediate interruption (<1s, 200ms typical) when mains voltage (220V/240V<sub>RMS</sub>) is applied. No flames, no explosion. After fusing, the resistance value is >100KOhm.

For other voltages test suitability in the application!

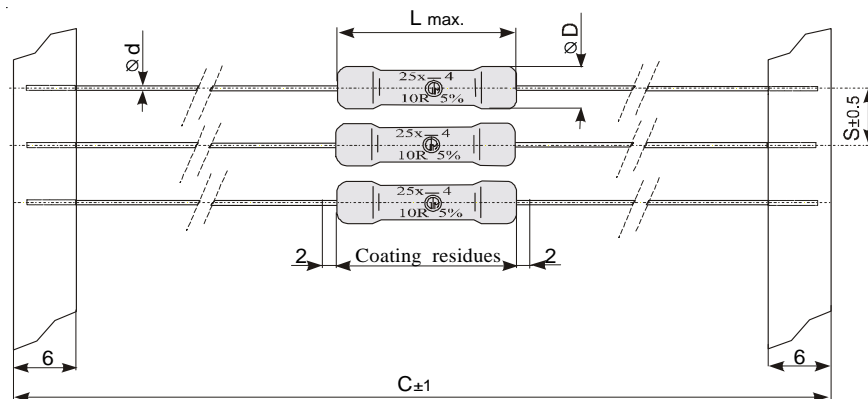
\* Resistance values < 10R are flame retardant.

The interruption mechanism is not clearly defined and has to be tested in the final application!

| Type     | L max. | ØD max. | Ød   |
|----------|--------|---------|------|
| CRF251-4 | 9,0    | 3,0     | 0,65 |
| CRF252-4 | 9,7    | 4,0     | 0,80 |
| CRF253-4 | 14,5   | 4,5     | 0,65 |
| CRF254-4 | 12,6   | 6,0     | 0,80 |
| CRF256-4 | 17,0   | 6,0     | 0,80 |
| CRF257-4 | 18,0   | 8,5     | 0,80 |

\*R <10R Dmax. +1

Dimensions in mm:



Packaging:

| Type     | Packaging      | Pieces | Code | C  | S  |
|----------|----------------|--------|------|----|----|
| CRF251-4 | taped/Ammopack | 1000   | T    | 65 | 5  |
| CRF252-4 | taped/Ammopack | 1000   | T    | 65 | 5  |
| CRF253-4 | taped/Ammopack | 1000   | T    | 85 | 10 |
| CRF254-4 | taped/Ammopack | 1000   | T    | 85 | 10 |
| CRF256-4 | taped/Ammopack | 1000   | T    | 85 | 10 |
| CRF257-4 | taped/Ammopack | 500    | T    | 85 | 10 |

Ordering example: CRF254-4      5      T      15R  
 Type      Tolerance      Pack.-Code      R-Value

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