

SLOVENSKI STANDARD
SIST EN 140401-801:2003/A1:2003
01-oktober-2003

Detail specification: Fixed low power non wire-wound surface mount (SMD) resistors - Rectangular - Stability classes 0,1; 0,25; 0,5, 1 - New Style RR 5025M

Detail Specification: Fixed low power non wire-wound surface mount (SMD) resistors - Rectangular - Stability classes 0,1; 0,25; 0,5; 1

Bauartspezifikation: Oberflächenmontierbare nichtdrachtgewickelte Festwiderstände (SMD) niedriger Belastbarkeit - Rechteckig - Stabilitätsklassen 0,1; 0,25; 0,5; 1

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Spécification particulière: Résistances fixes non bobines faible dissipation pour montage en surface (CMS) - Rectangulaires - Catégories de stabilité 0,1; 0,25; 0,5; 1

[SIST EN 140401-801:2003/A1:2003](https://standards.iteh.ai/catalog/standards/sist/bc8994d3-c014-401d-9fb5-7c40f95941d1/sist-en-140401-801-2003-a1-2003)

Ta slovenski standard je istoveten z: **EN 140401-801:2002/A1:2003**

ICS:

31.040.10 Fiksni upor Fixed resistors

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English version

Detail Specification:
Fixed low power non wire-wound surface mount (SMD) resistors –
Rectangular –
Stability classes 0,1; 0,25; 0,5; 1

Spécification particulière:
Résistances fixes non bobinées à faible
dissipation pour montage en surface
(CMS) –
Rectangulaires –
Catégories de stabilité 0,1; 0,25; 0,5; 1

Bauartspezifikation:
Oberflächenmontierbare
nichtdrachtgewickelte Festwiderstände
(SMD) niedriger Belastbarkeit –
Rechteckig –
Stabilitätsklassen 0,1; 0,25; 0,5; 1

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This amendment A1 modifies the European Standard EN 140401-801:2002; it was approved by CENELEC on 2003-04-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

This amendment was prepared by the Technical Committee CENELEC TC 40XB, Resistors.

This amendment results from two draft amendments which were submitted to the Unique Acceptance Procedure (prA1 and prAA) and were approved by CENELEC as amendment A1 to EN 140401-801:2002 on 2003-04-01.

The following dates were fixed:

- latest date by which the amendment has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2004-04-01
 - latest date by which the national standards conflicting
with the amendment have to be withdrawn (dow) 2006-04-01
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[SIST EN 140401-801:2003/A1:2003](https://standards.iteh.ai/catalog/standards/sist/bc8994d3-c014-401d-9fb5-7e4bf7c9541d/sist-en-140401-801-2003-a1-2003)

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1 Characteristics and rating

Table 1 Add the following row:

Style		Length <i>L</i> mm		Width <i>W</i> mm		Height <i>H</i> mm		Termination <i>T</i> mm		Weight ^a mg
metric	inch	min.	max.	min.	max.	min.	max.	min.	max.	max.
RR 5025M	RR 2010	4,80	5,20	2,30	2,70	0,35	0,75	0,35	0,85	30,0

Table 2a Add the following row:

Style	Stability class	Rated dissipation <i>P</i> ₇₀ mW	Limiting element voltage d.c. or a.c. (r.m.s.) <i>U</i> _{max} V	Insulation voltage d.c. or a.c. (peak) <i>U</i> _{ins} V	
				1 min	continuous
RR 5025M	1 ; 0,5 ; 0,25	330	300	300	75

Table 2b Add the following row:

Style	Stability class	Rated dissipation <i>P</i> ₇₀ mW	Limiting element voltage d.c. or a.c. (r.m.s.) <i>U</i> _{max} V	Insulation voltage d.c. or a.c. (peak) <i>U</i> _{ins} V	
				1 min	continuous
RR 5025M	0,1	150	100	300	75

Table 2c Add the following row:

Style	Maximum current <i>I</i> _{max} A	Maximum resistance value ^a <i>R</i> _{max} mΩ	Insulation voltage d.c. or a.c. (peak) <i>U</i> _{ins} V	
			1 min	continuous
RR 5025M	3	20	300	75

Table 3a Add the following rows:

Style	Tolerance on rated resistance		Temperature coefficient ppm/K	Resistance range	Stability class
	%	Code ^a			
RR 5025M	± 1	F	± 50; ± 25	1 Ω to <10 Ω	1
				10 Ω to 332 kΩ	0,5
				>332 kΩ to 3 MΩ	1
	± 0,5	D	± 50; ± 25	1 Ω to <10 Ω	1
				10 Ω to 332 kΩ	0,5
				>332 kΩ to 3 MΩ	1
	± 0,25	C	± 25; ± 15; ± 10	43 Ω to 3 MΩ	0,25
				43 Ω to 3 MΩ	0,1
	± 0,1	B	± 25; ± 15; ± 10	43 Ω to 3 MΩ	0,25
				43 Ω to 3 MΩ	0,1

Table 3b Add the following rows:

Style	Tolerance on rated resistance		Temperature coefficient ppm/K	Resistance range	Stability class	E series
	%	Code ^a				
RR 5025M	± 1	F	± 50	1 Ω to <10 Ω	1	E96
				10 Ω to 332 kΩ	0,5	
	>332 kΩ to 3 MΩ	1				
	± 0,1	B	± 15	43Ω to 3 MΩ	0,25	E192

Figures 3, 5, 6, 7 and 10

Add RR 5025M style on each RR 3216M style curve.

Table 9 Add the following row:

Style	Thermal resistance R_{th} (K/W)	
	for $\vartheta_s = 125$ °C	for $\vartheta_s = 85$ °C
RR 5025M	170	100

Add a new subclause after Figure 10.

1.9.10 Temperature range extension

Component manufacturers may specify the suitability of their components for 155 °C maximum temperature. Derating will be linear from 100 % dissipation at 70 °C to 0 % dissipation at 155 °C. Resistance change due to endurance at 155 °C temperature is expected to be twice the specified change at 125 °C.

The applicable advanced dissipation will be higher than the specified rated dissipation. Reference is required to either the same thermal circuit board conditions as used for this specification, or to specified special thermal circuit board conditions. Typical dissipation values at identical thermal conditions are given in Table 10.

Further advanced dissipation levels may be achievable in circuit board environments with improved thermal conditions, i.e. better heat flow capabilities from the component to the environment.

The component manufacturer may provide test data on the component's performance at the extended temperature level and advanced dissipation level.

The use of an extended temperature range on a component is likely to result in an increased temperature on the component's solder joints. This may require the selection of a suitable solder material in order to maintain the reliability of the solder joint.

Table 10 – Typical dissipation values at identical thermal conditions

Style	Rated dissipation P_{70} mW	Advanced dissipation P_{70} mW
RR 1005M	63	100
RR 1608M	100	125
RR 2012M	125	200
RR 3216M	250	400
RR 5025M	330	500