SLOVENSKI STANDARD

SIST EN 140401-802:2003/A1:2004

01-julij-2004

Detail specification: Fixed low power non wire-wound surface mount (SMD) resistors - Rectangular - Stability classes 1; 2

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Bauartspezifikation: Oberflchenmontierbare nichtdrachtgewickelte Festwiderstnde (SMD) niedriger Belastbarkeit - Rechteckig - Stabilittsklassen 1; 2

Spcification particulire: Rsistances fixes non bobines, faible dissipation pour montage en surface (CMS) - Rectangulaires - Catgories de stabilit 1; 2

Ta slovenski standard je istoveten z: **EN 140401-802:2002/A1:2004**

ICS:

31.040.10	Fiksni upor	Fixed resistors

SIST EN 140401-802:2003/A1:2004 **en**

EUROPEAN STANDARD **EN 140401-802/A1**

NORME EUROPÉENNE

EUROPÄISCHE NORM April 2004

ICS 31.040.10

English version

Detail specification: Fixed low power non wire-wound surface mount (SMD) resistors - Rectangular - Stability classes 1; 2

Spécification particulière:
Résistances fixes non bobinées
à faible dissipation
pour montage en surface (CMS) -
Rectangulaires -
Catégories de stabilité 1; 2

Bauartspezifikation:
Oberflächenmontierbare
nichtdrachtgewickelte Festwiderstände
(SMD) niedriger Belastbarkeit -
Rechteckig -
Stabilitätsklassen 1; 2

This amendment A1 modifies the European Standard EN 140401-802:2002; it was approved by CENELEC on 2004-03-01. 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, 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

Ref. No. EN 140401-802:2002/A1:2004 E

Foreword

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

It combines the text of two draft amendments (prA1 and prAA), which were submitted to the Unique Acceptance Procedure and were approved by CENELEC as amendment A1 to EN 140401-802:2002 on 2004-03-01.

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) 2005-03-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2007-03-01

Table 1 **Add:**

Style		Length *L* mm		Width *W* mm		Height *H* mm		Termination *T* mm		Weight 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:**

Style	Rated dissipation P_{70} mW	Limiting element voltage d.c. or a.c. (r.m.s.) U_{max} V	Insulation voltage d.c. or a.c. (peak) U_{ins} V	
			1 min	**continuous**
RR 5025M	500	300	300	75

Table 2b **Add:**

Style	Maximum current I_{max} A	Maximun resistance value R_{max} mΩ	Insulation voltage d.c. or a.c. (peak) U_{ins} V	
			1 min	**continuous**
RR 5025M	3,0	20	300	75

Table 3a **Add:**

Style	Tolerance on rated resistance %	Code [a]	Temperature coefficient ppm/K	Resistance range	Stability class
RR 5025M	± 5	J	± 200	1 Ω to 10 MΩ	2
	± 2	G	± 100	10 Ω to 1 MΩ	2
	± 1	F	± 100 ; ± 50	10 Ω to 1 MΩ	1

Table 3b Add:

Style	Tolerance on rated resistance		Temperature coefficient	Resistance range	Stability class	E series
	%	Code [a]	ppm/K			
RR 5025M	± 5	J	± 200	1 Ω to < 10 Ω	2	E24
				> 1 MΩ to 10 MΩ	2	
	± 1	F	± 100	10 Ω to 1 MΩ	1	E96
			± 50	10 Ω to 1 MΩ	1	

Figures 3, 5, 6 and 7:

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

Table 7 Add:

Style	Thermal resistance R_{th} (K/W) for ϑ_s = 125 °C
RR 5025M	110

Figure 10

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

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	150
RR 2012M	125	200
RR 3216M	250	400
RR 5025M	500	770