



DOCUMENT CHANGE REQUEST

TO BE COMPLETED BY ORIGINATOR

Originator (1) Jude Neylon	Originator signature (2) 	NSA or ESA representative signature (3) 	Change request No. (4)
Affiliation Betatherm Ireland Ltd.	Date: 26th October 2007	Date: 7 November 2007	Page 1 of [4] (5)

DOCUMENT AFFECTED

Doc. No. (6) 4006/014	Status (7) Issue 5 July 2007	Title (8) THERMISTORS (THERMALLY SENSITIVE RESISTORS), NCT, RANGE 2 000 TO 15 000 OHMS AT + 25°C WITH A TEMPERATURE RANGE OF - 60 TO + 160 °C	Other documents affected (10) NONE
Paragraph(s) and page(s) affected (9) Pages: 1,5,6,7,8,12, 17 Paragraphs: Specification Title; para.1.1; Table 1(a); Note 3 to Table 1(b); Table of Figure 2; Table 2; Appendix A.			

PROPOSED WORDING OF CHANGE

SEE ATTACHED PAGES

Continuation sheet(s) attached: ☒ Yes ☐ No

JUSTIFICATION

SEE ATTACHED PAGES

Continuation sheet(s) attached: ☒ Yes ☐ No

Changes required for:

Procurement (project)	<input checked="" type="checkbox"/>	Qualification	<input type="checkbox"/>	MRB decision	<input type="checkbox"/>
General Improvement of Spec.	<input type="checkbox"/>	Other	<input type="checkbox"/>		

RESERVED FOR USE BY SCC SECRETARIAT

Date of registration	Order of priority for Appr. / Impl.:	1 (high)	2 (medium)	3 (low)
Attachments	Qualification status:	Qualified	In process of qualification	

RESERVED FOR USE BY APPROVING AUTHORITY

Approved <input type="checkbox"/> Yes <input type="checkbox"/> No Priority <input type="checkbox"/>	Date and signature	Reference to SCCG decision
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Approved wording, if different from box 11 or reason for rejection

Continuation sheet(s) attached: ☐ Yes ☐ No



DOCUMENT CHANGE REQUEST

CONTINUATION SHEET FOR BOX []

Change request No.)

Page 2 of [4]

CHANGE: Page 1 - Title

from "...RANGE 2000 TO 15000 OHMS AT + 25°C WITH..."
to "... RANGE 2000 TO 100000 OHMS AT + 25°C WITH..."

from "...BASED ON TYPE G15K4D489, G10K4D453, G2K7D411, G4K7D421"
to "...BASED ON TYPE G15K4D489, G10K4D453, G2K7D411, G4K7D421, G100K6D487"

JUSTIFICATION:

The new variant 12 (based on Type G100K6D487) has been developed to meet current customer demand. The construction is similar to the previous ESCC 400601405B Issue 4, July 2005. The main difference is that the glass bead coating and wire type / ferrule are the same as the qualified part ESCC 400601408B Issue 5, July 2006. (G15K4D489).

CHANGE: Page 5 Paragraph 1.1

from "...Range 2000 to 15000 OHMS at + 25°C with..."
to "...Range 2000 to 100000 OHMS at + 25°C with..."

from "...based on type G15K4D489, G10K4D453, G2K7D411, G4K7D421."
to "...based on type G15K4D489, G10K4D453, G2K7D411, G4K7D421, G100K6D487."

JUSTIFICATION:

The new variant 12 (based on Type G100K6D487) has been developed to meet current customer demand. The construction is similar to the previous ESCC 400601405B Issue 4, July 2005. The main difference is that the glass bead coating and wire type / ferrule are the same as the qualified part ESCC 400601408B Issue 5, July 2006. (G15K4D489).

CHANGE:

Page 6 Table 1(a) Add variant 12 to Table, giving resistance values and appropriate resistance tolerances at temperatures +25°C; +100°C; +125°C; + 140°C; +160°C. The insertion is as follows:

VARIANT	BASED ON TYPE	R _Z	RESISTANCE/TEMPERATURE CHARACTERISTICS (NOTE 3)										
			-60 °C	-40 °C	-20 °C	0 °C	+25 °C	+50 °C	+70 °C	+100 °C	+125 °C	+140 °C	+160 °C
12	G100K6D487	NOM (Ω)	--	--	--	---	100000	--	---	5574	2642.4	1756.3	1059.0
		TOL (±%)					1.75			1.11	1.41	1.32	1.21

JUSTIFICATION:

The new variant 12 (based on Type G100K6D487) has been developed to meet current customer demand. The construction is similar to the previous ESCC 400601405B Issue 4, July 2005. The main difference is that the glass bead coating and wire type / ferrule are the same as the qualified part ESCC 400601408B Issue 5, July 2006. (G15K4D489). The tolerances from +100°C to +160°C are achievable as the Betatherm ceramic curve for this product is equivalent to the Fenwal curve on which these specification tolerances were based.

DOCUMENT CHANGE REQUEST

CONTINUATION SHEET FOR BOX []

Change request No.)

Page 3 of [4]

CHANGE:

Page 7 Table 1(b) Change Note 3 **from** “ – 40°C for Variants 10, 11 and – 60°C for Variant 08 and 09 to the Maximum Operating Temperature specified in Column 4 of Table 1(a)” **to** “ – 40°C for Variants 10, 11, 12; and – 60°C for Variants 08 and 09 to the Maximum Operating Temperature specified in Column 4 of Table 1(a)”

JUSTIFICATION:

To include the storage temperature range of the new Variant 12.

CHANGE: Change Page 8, Table of Figure 2, **from**

SYMBOL	MILLIMETRES					
	VARIANT 08		VARIANT , 09		VARIANT 10,11	
	MIN	MAX	MIN	MAX	MIN	MAX
A	356	406	500	550	280	330
B	6.1	6.6	6.1	6.6	6.1	6.6
C	-	2.4	-	2.8	-	2.8
D	-	9.8	-	9.8	-	9.8
E	0.33	0.48	0.33	0.48	0.33	0.48
F	-	50	-	50	-	50
G	50	80	50	80	50	80

to

SYMBOL	MILLIMETRES					
	VARIANT 08		VARIANT , 09		VARIANT 10,11,12	
	MIN	MAX	MIN	MAX	MIN	MAX
A	356	406	500	550	280	330
B	6.1	6.6	6.1	6.6	6.1	6.6
C	-	2.4	-	2.8	-	2.8
D	-	9.8	-	9.8	-	9.8
E	0.33	0.48	0.33	0.48	0.33	0.48
F	-	50	-	50	-	50
G	50	80	50	80	50	80

JUSTIFICATION:

To include physical dimensions for the new Variant 12.



DOCUMENT CHANGE REQUEST

CONTINUATION SHEET FOR BOX []

Change request No.)

Page 4 of [4]

CHANGE:

Page 12, Table 2, No. 3 change from

3	Thermal Time Constant Variant 08 Variants 09,10,11	KH	Para. 9.3.1.3 $T_{amb} = +25 \pm 1^{\circ}\text{C}$ In Still Air Note 3	- -	25 40	sec.
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to

3	Thermal Time Constant Variants 08 Variants 09,10,11,12	KH	Para. 9.3.1.3 $T_{amb} = +25 \pm 1^{\circ}\text{C}$ In Still Air Note 3	- -	25 40	sec.
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JUSTIFICATION:

To include the Thermal Time Constant characteristic of the new Variant 12.

CHANGE:

Page 17, Appendix 'A'; AGREED DEVIATIONS FOR BETATHERM (IRELAND), for all three "ITEMS AFFECTED" – Para. 9.2 Thermal Shock; Para. 7.4/7.4.1 Check for Lot Failure/Lot Failure during 100% Testing; and Para. 9.14.2 Operating Life during Lot Acceptance Testing.

change from "For Variants 08, 09, 10, 11....." to "For Variants 08, 09, 10, 11, 12....."

JUSTIFICATION:

To apply the current agreed deviations for Betatherm Ireland to the new Variant 12.