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LITTELFUSE INC  
 MR W TRAVIS, STANDARDS ENGINEER  
 800 E NORTHWEST HWY  
 DES PLAINES IL 60016

**RE: Project Number(s) - 01NK40311**

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**XGPU2**  
**Thermistor Type Devices - Component**

May 14, 2002

LITTELFUSE INC  
 800 E NORTHWEST HWY, DES PLAINES IL 60016

E183209

**PTC Current Limiter:**

| Model No.    | Voltage (V) | Current (A) |     |      |     | Tmoa (C) | Class | CA             |
|--------------|-------------|-------------|-----|------|-----|----------|-------|----------------|
|              |             | Ih          | It  | Imax | Isc |          |       |                |
| 2029S100+    | 15 dc       | 1.1         | 2.2 | 8.0  | 40  | 25       | C2    | 2,3,4,#        |
| 2029L125+    | 15 dc       | 1.25        | 2.5 | 8.0  | 40  | 25       | C2    | 2,3,4,#        |
| 3425L150+    | 15 dc       | 1.5         | 3.0 | 8.0  | 40  | 25       | C2    | 2,3,4,#        |
| 3425L200+    | 15 dc       | 2.0         | 4.0 | 8.0  | 40  | 25       | C2    | 2,3,4,#        |
| 3425L250+    | 15 dc       | 2.5         | 5.0 | 8.0  | 40  | 25       | C2    | 2,3,4,#        |
| 3425L300     | 6 dc        | 3.0         | 6.0 | 15.0 | 40  | 25       | C2    | 2,3,4,#        |
| 1812X110++   | 6 dc        | 1.1         | 2.2 | 8.0  | 40  | 25       | C2    | 2,3,4,#        |
| 1812X110+++  |             |             |     |      |     |          |       |                |
| 1812X075++   | 13.2 dc     | 0.75        | 1.5 | 8.0  | 40  | 25       | C2    | 2,3,4,#        |
| 1812X020     | 30 dc       | 0.2         | 0.4 | 8.0  | 10  | 25       | C3    | 2,3,4,#        |
| 1812X050++   | 15 dc       | 0.5         | 1.0 | 8.0  | 40  | 25       | C2    | 2,3,4,#        |
| 1812X150++   | 6 dc        | 1.5         | 3.0 | 8.0  | 40  | 25       | C3    | 2,3,4,#        |
| 1812X125++   | 6 dc        | 1.25        | 2.5 | 8.0  | 40  | 25       | C3    | 2,3,4,#        |
| 1812X200MR++ | 6 dc        | 2.0         | 4.0 | 8.0  | 40  | 25       | C2    | 2,4,5,#        |
| 1812X260MR++ | 6 dc        | 2.6         | 5.2 | 8.0  | 40  | 25       | C2    | 2,4,5,#        |
| 1206X050+++  | 6           | 0.5         | 1.0 | 8.0  | 40  | 25       | C1    | 1(110),2,3,4,# |
| 1206X075+++  | 6           | 0.75        | 1.5 | 8.0  | 40  | 25       | C1    | 1(110),2,3,4,# |
| 1206X110+++  | 6           | 1.1         | 2.2 | 8.0  | 40  | 25       | C1    | 1(110),2,3,4,# |
| 1206X150     | 6           | 1.5         | 3.0 | 8.0  | 40  | 25       | C2    | 1(112),2,3,4,# |
| 1206X035     | 6           | 0.35        | 0.7 | 8.0  | 40  | 25       | C1    | 1(103),2,3,4,# |
| 1206X025     | 15          | 0.25        | 0.5 | 8.0  | 40  | 25       | C1    | 1(100),2,3,4,# |
| 1206X020     | 15          | 0.20        | 0.4 | 8.0  | 40  | 25       | C1    | 1(100),2,3,4,# |
| 1812X050PRT  | 15 dc       | 0.5         | 1.0 | 8.0  | 40  | 25       | C2    | 2,3,4,#        |
| 1812X075PRT  | 13.2 dc     | 0.75        | 1.5 | 8.0  | 40  | 25       | C1    | 2,3,4,#        |

| Model No.   | Voltage (V) | Current (A) |       |      |     | Tmoa (C) | Class | CA           |
|-------------|-------------|-------------|-------|------|-----|----------|-------|--------------|
|             |             | Ih          | It    | Imax | Isc |          |       |              |
| 1812X110PRT | 6 dc        | 1.1         | 2.2   | 8.0  | 40  | 25       | C2    | 2,3,4,#      |
| 1812X125PRT | 6 dc        | 1.25        | 2.5   | 8.0  | 40  | 25       | C2    | 2,3,4,#      |
| 1812X150PRT | 6 dc        | 1.5         | 3.0   | 8.0  | 40  | 25       | C2    | 2,3,4,#      |
| 1812X160PRT | 6 dc        | 1.6         | 3.2   | 8.0  | 40  | 25       | C2    | 2,3,4,#      |
| 2029L260+   | 6 dc        | 2.6         | 5.2   | 8.0  | 40  | 25       | C2    | 2,3,4,#      |
| 030R090+    | 30 ac,dc    | 0.9         | 1.8   | 4.5  | 40  | 25       | C2    | 2,4,#        |
| 030R110+    | 30 ac,dc    | 1.1         | 2.2   | 5.5  | 40  | 25       | C2    | 2,4,#        |
| 030R135+    | 30 ac,dc    | 1.35        | 2.7   | 6.75 | 40  | 25       | C2    | 2,4,#        |
| 030R160+    | 30 ac,dc    | 1.6         | 3.2   | 8    | 40  | 25       | C2    | 2,4,#        |
| 030R185+    | 30 ac,dc    | 1.85        | 3.7   | 9.25 | 40  | 25       | C2    | 2,4,#        |
| 030R250+    | 30 ac,dc    | 2.5         | 5     | 12.5 | 40  | 25       | C2    | 2,4,#        |
| 030R300+    | 30 ac,dc    | 3           | 6     | 15   | 40  | 25       | C2    | 2,4,#        |
| 030R400+    | 30 ac,dc    | 4           | 8     | 20   | 40  | 25       | C2    | 2,4,#        |
| 030R500+    | 30 ac,dc    | 5           | 10    | 25   | 40  | 25       | C2    | 2,4,#        |
| 030R600+    | 30 ac,dc    | 6           | 12    | 30   | 40  | 25       | C2    | 2,4,#        |
| 030R700+    | 30 ac,dc    | 7           | 14    | 35   | 40  | 25       | C2    | 2,4,#        |
| 030R800+    | 30 ac,dc    | 8           | 16    | 40   | 40  | 25       | C2    | 2,4,#        |
| 030R900+    | 30 ac,dc    | 9           | 18    | 40   | 40  | 25       | C2    | 2,4,#        |
| 030R0090    | 30          | 0.90        | 1.80  | 40   | 40  | 25       | C1    | 1(121),2,4,# |
| 030R0110    | 30          | 1.10        | 2.20  | 40   | 40  | 25       | C1    | 1(123),2,4,# |
| 030R0135    | 30          | 1.35        | 2.70  | 40   | 40  | 25       | C1    | 1(123),2,4,# |
| 030R0160    | 30          | 1.60        | 3.20  | 40   | 40  | 25       | C1    | 1(123),2,4,# |
| 030R0185    | 30          | 1.85        | 3.70  | 40   | 40  | 25       | C1    | 1(123),2,4,# |
| 030R0250    | 30          | 2.50        | 5.00  | 40   | 40  | 25       | C1    | 1(123),2,4,# |
| 030R0300    | 30          | 3.00        | 6.00  | 40   | 40  | 25       | C1    | 1(122),2,4,# |
| 030R0400    | 30          | 4.00        | 8.00  | 40   | 40  | 25       | C1    | 1(122),2,4,# |
| 030R0500    | 30          | 5.00        | 10.00 | 40   | 40  | 25       | C1    | 1(125),2,4,# |
| 030R0600    | 30          | 6.00        | 12.00 | 40   | 40  | 25       | C1    | 1(125),2,4,# |
| 030R0700    | 30          | 7.00        | 14.00 | 40   | 40  | 25       | C1    | 1(125),2,4,# |
| 030R0800    | 30          | 8.00        | 16.00 | 40   | 40  | 25       | C1    | 1(125),2,4,# |
| 030R0900    | 30          | 9.00        | 18.00 | 40   | 40  | 25       | C1    | 1(125),2,4,# |
| 060R0010    | 60          | 0.10        | 0.20  | 40   | 40  | 25       | C1    | 1(110),2,4,# |
| 060R0017    | 60          | 0.17        | 0.34  | 40   | 40  | 25       | C1    | 1(110),2,4,# |
| 060R0020    | 60          | 0.20        | 0.40  | 40   | 40  | 25       | C1    | 1(110),2,4,# |
| 060R0025    | 60          | 0.20        | 0.50  | 40   | 40  | 25       | C1    | 1(110),2,4,# |
| 060R0030    | 60          | 0.30        | 0.60  | 40   | 40  | 25       | C2    | 1(121),2,4,# |
| 060R0040    | 60          | 0.40        | 0.80  | 40   | 40  | 25       | C2    | 1(121),2,4,# |
| 060R0050    | 60          | 0.50        | 1.00  | 40   | 40  | 25       | C2    | 1(121),2,4,# |
| 060R0065    | 60          | 0.65        | 1.30  | 40   | 40  | 25       | C2    | 1(121),2,4,# |
| 060R0075    | 60          | 0.75        | 1.50  | 40   | 40  | 25       | C2    | 1(121),2,4,# |
| 060R0110    | 60          | 1.10        | 2.20  | 40   | 40  | 25       | C1    | 1(119),2,4,# |
| 060R0135    | 60          | 1.35        | 2.70  | 40   | 40  | 25       | C1    | 1(120),2,4,# |
| 060R0160    | 60          | 1.60        | 3.20  | 40   | 40  | 25       | C1    | 1(120),2,4,# |
| 060R0185    | 60          | 1.85        | 3.70  | 40   | 40  | 25       | C1    | 1(120),2,4,# |
| 060R0250    | 60          | 2.50        | 5.00  | 40   | 40  | 25       | C1    | 1(120),2,4,# |
| 060R0300    | 60          | 3.00        | 6.00  | 40   | 40  | 25       | C1    | 1(120),2,4,# |
| 060R0375    | 60          | 3.75        | 7.00  | 40   | 40  | 25       | C1    | 1(120),2,4,# |

**Polymeric positive temperature coefficient (PTC) resistors, Models 30R090, -110, -135, -160, -185, -250, -300, -400, -500, -600, -700, -800, -900, 60R010, -017, -020, -025, -030, -040, -050, -065, -075, -090, -110, -135, -160, -185, -250, -300, -375, 2029L030, -050, -075, -100.**

Model 030L followed by 090, 110, 135, 160, 185, 250, 300, 400, 600, 700, 800 or 900, may be followed by up to four suffix letters and/or numbers.

(+)May be followed by up to 4 suffix letters and/or numbers.

(++)'X' may be 'L' or 'S' may be followed by up to 4 suffix letters and/or numbers.

(+++)X' may be 'L' or 'S', may be followed by up to 4 suffix letters and/or numbers, followed by the letter "N".

# Unique conditions of acceptability.

These devices have been evaluated for indoor use only.

The trip state of these devices shall be apparent in the end-use application and a manual intervention is required in order to reset the device.

Marking: Company name and part or model designation on product.

## **Underwriters Laboratories Inc.®**

**See General Information Preceding These Recognitions**

For use only in equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.