

# Zertifikat

# Certificate



Zertifikat Nr. *Certificate No.*  
R 60006629

Blatt *Page*  
0001

Ihr Zeichen *Client Reference*

Unser Zeichen *Our Reference*  
0001-- 02850158 001

Ausstellungsdatum  
08.12.2003

*Date of Issue*  
(day/mo/yr)

**Genehmigungsinhaber *License Holder***

Syfer Technology LTD.  
Old Stoke Road  
Norwich, NR 14 8SQ  
Great Britain

**Fertigungsstätte *Manufacturing Plant***

Syfer Technology LTD.  
Old Stoke Road  
Norwich, NR 14 8SQ  
Great Britain

**Prüfzeichen *Test Mark***



**Geprüft nach *Tested acc. to***

EN 130000:1993+A8+A9+A10  
EN 132400:1994+A2+A3+A4  
IEC 60384-14:1993+A1

**Zertifiziertes Produkt (Geräteidentifikation)**  
*Certified Product (Product Identification)*

**Lizenzentgelte - Einheit**  
*License Fee - Unit*

Capacitor (Fixed Monolithic Ceramic Chip Capacitor)

Type Designation: Type A: 2220JA25xxxxxyXTB16 8  
Type B: 2220JA25xxxxxyXTB17  
(x denotes the rated capacity, x=0-9)  
(y denotes the tolerance, y=J, K or M)

Class/Subclass: Type A: X1/Y2  
Type B: X2

Rated Voltage: AC 250V

Rated Capacitance: Type A: 150pF - 4700pF  
Type B: 150pF - 10000pF

Climatic and  
Flammability Category: 55/125/56/C

Remark: Table II Safety Tests of IEC 60384-14:1993+A1  
has been considered.

8

ANLAGE (Appendix): 1

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde.  
Das Produkt entspricht den o.g. Anforderungen, die Herstellung wird überwacht.  
This certificate is based on our Testing and Certification Regulation. The product  
fulfills above mentioned requirements, the production is subject to surveillance.

Zertifizierungsstelle



TÜV Rheinland Product Safety GmbH, Am Grauen Stein, D-51105 Köln  
Tel.: (+49/221)8 06 - 13 71 e-mail: cert-validity@de.tuv.com  
Fax: (+49/221)8 06 - 39 35 http://www.tuv.com/safety

Dipl.-Ing. F. Möcking

**Constructional Data Form for Capacitor**

**Licenseholder :** Syfer Technology Ltd  
 Old Stoke Road, Arminghall Norwich, Norfolk NR14 8SQ

**Factory :** Syfer Technology Ltd  
 (full address) Old Stoke Road, Arminghall Norwich, Norfolk NR14 8SQ

**Type or Model Number :** Syfer Type A, Syfer Type B  
**Kind of device:** Chip Capacitor

**Rated voltage (U<sub>R</sub>)** AC 250V  
**Frequency** 50/60Hz  
**Capacitor Class and sub class** Type A Y2/X1, Type B X2  
**Rated Capacitance (C<sub>R</sub>) and Tolerance** 150pF to 10nF See page 3 for details  
**Mounting** PCB  
**Termination type** Termination bands  
**Dimensions** See page 2

**Component parts:**

Component	Manufacturer	Material name	Flame class	PTI
<b>Dielectric Material</b>	Ferro Electronic Materials	X7R262L	N/A	175/200
<b>Dielectric Thickness</b>	>32uM			
<b>Number of individual layers</b>	3 to 70 depending on capacitance value			
<b>Electrode Material</b>	DMC2	Silver / Palladium Electrode Paste		175/200
<b>Electrode</b>	Screen Printing			
<b>Kind of generating</b>				
<b>Capacitor Element arrangement</b>	Sectional or Series construction			
<b>Impregnant</b>	N/A			175/200
<b>Encapsulation material</b>	N/A			175/200

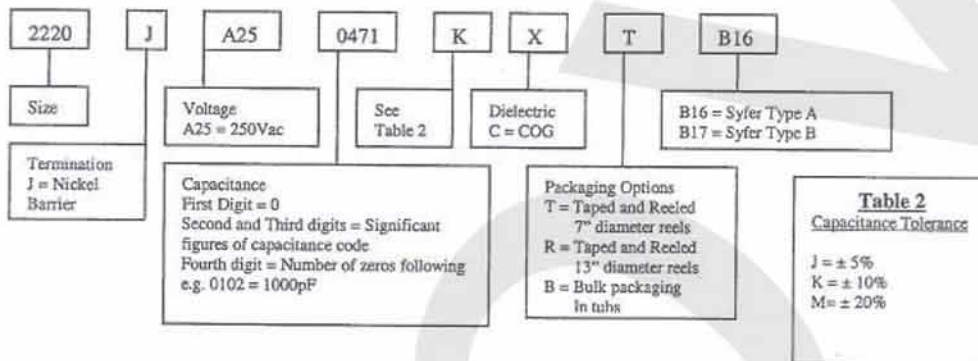
Köln, den 8/12/3  
  
**TÜV Rheinland**  
 Product Safety GmbH

**SYFER TECHNOLOGY LTD**  
 (Date)

21/10/2003  
 (Date)

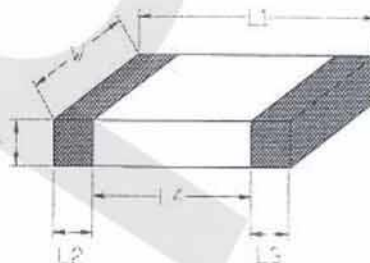
Constructional Data Form for Capacitor

Ordering Information



Mechanical Specification

Syfer Size	2220
Length (L1) mm	5.70 ± 0.40
Width (W) mm	5.00 ± 0.40
Thickness (H) mm	2.54 Max.
Termination Bands mm(L2, L3)	0.25 – 1.00mm
Creepage Distance (L4)	4.00 Min.
Termination Material	Nickel Barrier
Solderability	IEC 68-2-20



Marking

Marking code to consist of Syfer logo (S), the type designation (A), and a capacitance code in accordance with the table below.

Köln, den 8/10/03  
*Nick O. P...*  
TÜV Rheinland  
Product Safety GmbH

SYFER TECHNOLOGY LTD  
0203 511 0000

21/10/2003  
(Date)

Constructional Data Form for Capacitor

Capacitance	Syfer part Number	Print Code	Syfer Type	Class	Rated Voltage	Safety Standard		
150pF	2220JA250151*XTB16	150p	Type A	X1/Y2	250Vac 55/125/56/C	IEC60384-14 2nd Edition 1993 EN132400 1995		
180pF	2220JA250181*XTB16	180p						
220pF	2220JA250221*XTB16	220p						
270pF	2220JA250271*XTB16	270p						
330pF	2220JA250331*XTB16	330p						
390pF	2220JA250391*XTB16	390p						
470pF	2220JA250471*XTB16	470p						
560pF	2220JA250561*XTB16	560p			Type A	X1/Y2	250Vac 55/125/56/C	IEC60384-14 2nd Edition 1993 EN132400 1995
680pF	2220JA250681*XTB16	680p						
820pF	2220JA250821*XTB16	820p						
1nF	2220JA250102*XTB16	1n						
1.2nF	2220JA250122*XTB16	1n2						
1.5nF	2220JA250152*XTB16	1n5						
1.8nF	2220JA250182*XTB16	1n8						
2.2nF	2220JA250222*XTB16	2n2						
2.7nF	2220JA250272*XTB16	2n7						
3.3nF	2220JA250332*XTB16	3n3						
3.9nF	2220JA250392*XTB16	3n9						
4.7nF	2220JA250472*XTB16	4n7						

Capacitance	Syfer part Number	Print Code	Syfer Type	Class	Rated Voltage	Safety Standard
5.6nF	2220JA250562*XTB17	5n6	Type B	X2	250Vac 55/125/56/C	IEC30684-14 2 <sup>nd</sup> edition 1993 EN132400 1995
6.8nF	2220JA250682*XTB17	6n8				
8.2nF	2220JA250822*XTB17	8n2				
10nF	2220JA251039*XTB17	10n				

Capacitance Values

Syfer Type A = 150pF to 4.7nF, Classification Y2/X1

Syfer Type B = 150pF to 10nF, Classification X2

For Syfer Type B parts below 5.6nF Syfer Type A parts will be substituted

Köln, den 8/2/03

TÜV Rheinland  
Product Safety GmbH

SYFER TECHNOLOGY LTD

0203 21102003

21/10/2003

(Date)