



the standard in safety

Underwriters
Laboratories

File E300818

Vol 2

Issued: 2008-08-01
Revised: 2008-08-08

FOLLOW-UP SERVICE PROCEDURE
(TYPE R)

COMPONENT - ACROSS-THE-LINE CAPACITORS, ANTENNA-COUPLING AND
LINE-BYPASS COMPONENTS
(FOWX2)

Manufacturer: HOLY STONE ENTERPRISE CO LTD
(459147-001) 56 LANE 90 KUNG WU RD
WU LIN VILLAGE
LUNG TAN HSIANG
TAOYUAN HSIEN 325 TAIWAN

Applicant: HOLY STONE ENTERPRISE CO LTD
(100118-124) 1ST FL, # 62 SEC 2
HUANG SHAN RD
NEI HU DIST
TAIPEI
114 TAIWAN

Recognized Company: SAME AS APPLICANT
(100118-124)

This Procedure authorizes the above manufacturer to use the marking specified by Underwriters Laboratories Inc. (UL), or any authorized licensee of UL, only on products covered by this Procedure, in accordance with the applicable UL Services Agreement.

The prescribed Mark or Marking shall be used only at the above manufacturing location on such products which comply with this Procedure and any other applicable requirements.

The Procedure contains information for the use of the above named Manufacturer and representatives of Underwriters Laboratories Inc. and is not to be used for any other purpose. It is lent to the Manufacturer with the understanding that it is not to be copied, either wholly or in part, and that it will be returned to Underwriters Laboratories Inc. (UL) or any authorized licensee of UL, upon request.

This PROCEDURE, and any subsequent revision, is the property of Underwriters Laboratories Inc. (UL) and the authorized licensee of UL and is not transferable.

Underwriters Laboratories Inc.

Stephen Hewson
Senior Vice President
Global Follow-Up Service Operations

William R. Carney
Director
North American Certification Program

Recognized Component Marking Data Page (RCMDP)

(FILE IMMEDIATELY AFTER AUTHORIZATION PAGE)

RECOGNIZED COMPONENT MARKING

Products Recognized under UL's Component Recognition Service are identified by marking elements consisting of:

1. The Recognized Company's identification specified in this document.
2. A catalog, model or other applicable product designation specified in the descriptive sections of this document.
3. The UL Recognized Component Mark shown below is optional unless required elsewhere in the Procedure.

Only those components, which actually bear the Marking, should be considered as being covered under the Recognition Program. The UL Listing or Classification Mark is not authorized for use on or in connection with Recognized Components.

Recognized Component Mark



Minimum size of the Recognized Component Mark is not specified as long as it is legible. Minimum height of the registered symbol ® shall be 3/64 inch but may be omitted if it is out of proportion to the Recognized Component Mark or not legible to the naked eye.

The manufacturer may reproduce the Mark electronically. Any decision regarding the acceptability of the manufacturer's Mark reproduction will be made at the Reviewing Office.

Models

USR - Component - Class X1 and Class Y2 Capacitors,
Type SCC2211 (#, 0.00015 uF to 0.0022 uF), and Type
SCC2220 (#, 0.00015 uF to 0.0022 uF)

Section Report Date

1 2008-07-31

SPECIAL INSTRUCTIONS

UL REPRESENTATIVE:

GENERAL

SAMPLES FOR NORTHBROOK OFFICE:

Once (twice or four times or other frequency, as appropriate) each year, select the following samples or stock from production (produced within the last year), mark with the appropriate identification including group number, and forward to Conformity Assessment Services at Northbrook. Where more than one type designation is identified for a group, any one type may be selected.

The rating of the samples should be as indicated. If samples with the indicated rating are not available, samples with a rating as close as possible to the indicated rating should be provided.

	Group Suffix Number										
	1	2	3	4	5	6	7	8	9	10	11
Number of Samples:	25	25	65	90	25	25	65	90	25	25	25

Type Designation	Group Suffix	Rating
SCC2211	A-11L	0.0022 uF
SCC2220	A-11L	0.0022 uF

CONFORMITY ASSESSMENT SERVICES:

TESTS CONDUCTED BY UL

Conduct applicable tests outlined in UL 1414 as indicated below on samples of each group received from the Field Representative. Samples of each group not used for the initial test program should be held in reserve for possible additional tests as noted in the Standard.

Group Suffix Number	Test Required
1	Line-bypass Discharge
2	Line-bypass Life
3 and 4	Across-The-Line Discharge (As Received)
4	Across-The-Line Life
5	Double Protection Antenna-Coupling Discharge
6	Double Protection Antenna-Coupling Life
7 and 8	Double Protection Across-The-Line Discharge (As Received)
8	Double Protection Across-The-Line Life
9	X1 Impulse/Endurance
10	Y1 Impulse/Endurance
11	Y2 Impulse/Endurance

SUFFIX LETTER EXPLANATIONS

Groups may be provided with one or more suffix letters. These letters reflect test voltages and/or additional tests as noted below:

Suffix Letter	
A	Supply source - 125 V ac; Life test potential - 220/440 Dielectric Potential 1000 V
B	Supply source - 250 V ac; Life test potential - 440/880 Dielectric potential 1000 V
C	Leads-To-Enclosure Dielectric Potential - 1000 V (Double Protection Option Only)
D	Enclosure Flame Test
E	Supply source - 125 V ac; Life test potential 125/125
F	Supply source - 250 V ac; Life test potential 250/250
G	Supply source - 125 V ac; Life test potential - 220/440 Dielectric potential 1500 V
H	Supply source - 250 V ac; Life test potential - 440/880 Dielectric potential 1500 V
I	Impulse test potential - 4 kV dc; Endurance test potential 313/1000 V rms (X1)
J	Impulse test potential - 8 kV dc; Endurance test potential 213/1000 V rms (Y1 at 125V)
K	Impulse test potential - 8 kV dc; Endurance test potential 425/1000 V rms (Y1 at 250V)
L	Impulse test potential - 5 kV dc; Endurance test potential 425/1000 V rms (Y2)

PROCEDURE IN CASE OF FAILURE

Individual groups should be considered acceptable or unacceptable in accordance with the Standard.

Acceptability of Group

If a group containing a suffix number 1 or 2 is found unacceptable, all antenna-coupling and line-bypass capacitors having that same first group letter are considered unacceptable.

If a group containing a suffix number 3 or 4 is found unacceptable, all across-the-line and antenna-coupling capacitors having the same first group letter are considered unacceptable.

If a group containing a suffix number 5, 6, 7 or 8 is found unacceptable, all double-protection capacitors having the same first group letter are considered unacceptable.

If a group containing a suffix letter D is found unacceptable, all capacitors having the same first group letter are considered unacceptable.

If a group containing a suffix number 9 is found unacceptable, all Class X1 capacitors having that same first group letter are considered unacceptable.

If a group containing a suffix number 10 is found unacceptable, all Class Y1 capacitors having that same first group letter are considered unacceptable.

If a group containing a suffix number 11 is found unacceptable, all Class Y2 capacitors having that same first group letter are considered unacceptable.

INSTRUCTIONS FOR TESTS AND/OR INSPECTION AT THE FACTORY

FIELD REPRESENTATIVE:

The manufacturer is required to have the test equipment specified below. During the regular visits to the factory, determine that the equipment is functioning properly, and that the manufacturer is 1) performing the dielectric withstand test on 100 percent of production and 2) measuring the capacitance on 100 percent of production for double-protection capacitors.

Review the manufacturer's records to assure that the tests are being conducted and appropriate action is taken with respect to failures and rejections.

RESPONSIBILITY OF THE MANUFACTURER:

General - One hundred percent of production of each capacitor covered by this Procedure shall be subjected to the dielectric withstand test. Also, the capacitance of one hundred percent of production of each double-protection capacitor covered by this Procedure shall be measured. It shall also be the responsibility of the manufacturer to determine that the test equipment is functioning properly, and to have the test equipment calibrated at regular intervals, not less than once annually.

MANUFACTURER'S TEST EQUIPMENT:

As a minimum, the dielectric test equipment used by the manufacturer shall incorporate the following features.

1. A 500 VA minimum rated output transformer, or, the transformer may be constructed with a suitable voltmeter located across the output terminals to directly measure the applied output potential.
2. A visible indication (to the operator) of the application of the test voltage (voltmeter, lamp, etc.).
3. A visible or audible indication (readily visible to the operator during the application of the test potential) to indicate a dielectric breakdown.
4. A manual external reset switch which must be operated following a breakdown, or, provision to automatically reject the failed unit.

TEST TO BE CONDUCTED:

PRODUCTION-LINE DIELECTRIC VOLTAGE WITHSTAND TEST

GENERAL:

Except as may be noted under Exceptions included in Appendix B, the manufacturer shall subject 100 percent of production of all products to a routine Production-Line Dielectric Voltage-Withstand Test in accordance with the following.

All Components Except Double-Protection Capacitors

AC Potential - Method - Apply a 40-70 Hz, essentially sinusoidal potential across each pair of capacitor leads. The combination of potential and duration shall be not greater than Curve A and not less than Curve B. See ILL. 1 for curves.

DC Potential - Method for Wound Capacitors - In lieu of either AC potential method, the manufacturer may apply a 2000 V dc potential for 1 s.

DC Potential - Method for Ceramic Capacitors - In lieu of either AC potential method, the manufacturer may apply a DC potential provided that it is not greater than twice the value of Curve A and not less than twice the value of Curve B. See ILL. 1 for curves.

All Double-Protection Capacitors

Apply a 2500 V, 40-70 Hz, essentially sinusoidal potential for 1 s, across each pair of capacitor leads.

Basis for Acceptability

Each capacitor shall withstand the applied potential without breakdown for the required time duration.

CAPACITY MEASUREMENT FOR DOUBLE-PROTECTION CAPACITORS

Following the above dielectric withstand test, the capacitance of each double-protection capacitor is to be measured.

Basis for Acceptability

The measured capacitance of each capacitor shall be within the capacitance range, allowing for tolerance, marked on the capacitor.

MANUFACTURER'S RECORDS:

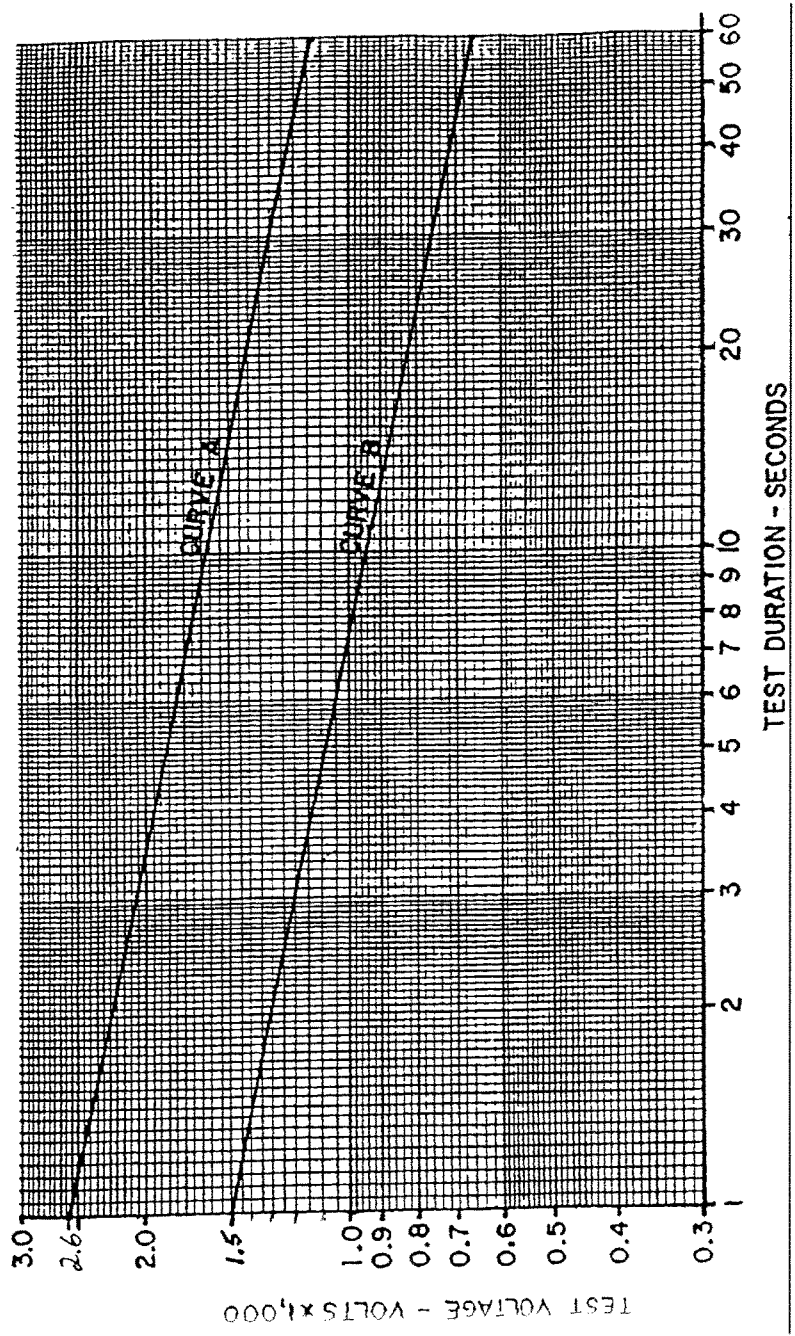
The manufacturer shall keep records of the test performance and corrective action taken on rejection. These records shall be readily available to the Field Representative.

EXCEPTIONS:

The following capacitors have been tested at UL and the following test potentials may be applied for the duration indicated during the Production-Line Dielectric Voltage Withstand Test.

Type Designation	*Maximum Test Potential and Maximum Duration+

+ - Duration may consist of several applications of the test potential. The last piece of equipment providing the dielectric test potential must be able to indicate dielectric breakdown.



DESCRIPTION

PRODUCT COVERED:

USR - Component - Class X1 and Class Y2 Capacitors, Type SCC2211 (#, 0.00015 uF to 0.0022 uF), and Type SCC2220 (#, 0.00015 uF to 0.0022 uF)

Note - # - May be followed by alpha-numeric characters designating ordering information.

ABBREVIATIONS:

USR - United States Standard - Recognized, indicates investigation to UL 1414, Sixth Edition, Dated, February 18, 2000.

TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE USE):

The Class X1 capacitors covered by this Report are intended for connection directly across a supply circuit. These capacitors are considered equivalent to across-the-line capacitors and may be used in complete equipment in place of across-the-line capacitors.

The Class Y2 capacitors covered by this Report are intended for connection from a shock hazardous part to accessible metal. These capacitors are considered equivalent to antenna-coupling and line-bypass capacitors and may be used in complete equipment in place of either antenna-coupling or line-bypass capacitor.

They are intended solely as factory installed components where the acceptability is to be determined by Underwriters Laboratories, Inc.

CONDITIONS OF ACCEPTABILITY:

1. These components have been investigated and are intended for use in radio and television receiving appliances and similar equipment, where the acceptability of the combination is determined by Underwriters Laboratories, Inc.
2. These components are intended for use in 60 Hz circuits up to a nominal 250 V.
3. The component has no enclosure and therefore spacing to enclosure hazards should be investigated in the end use product evaluation.

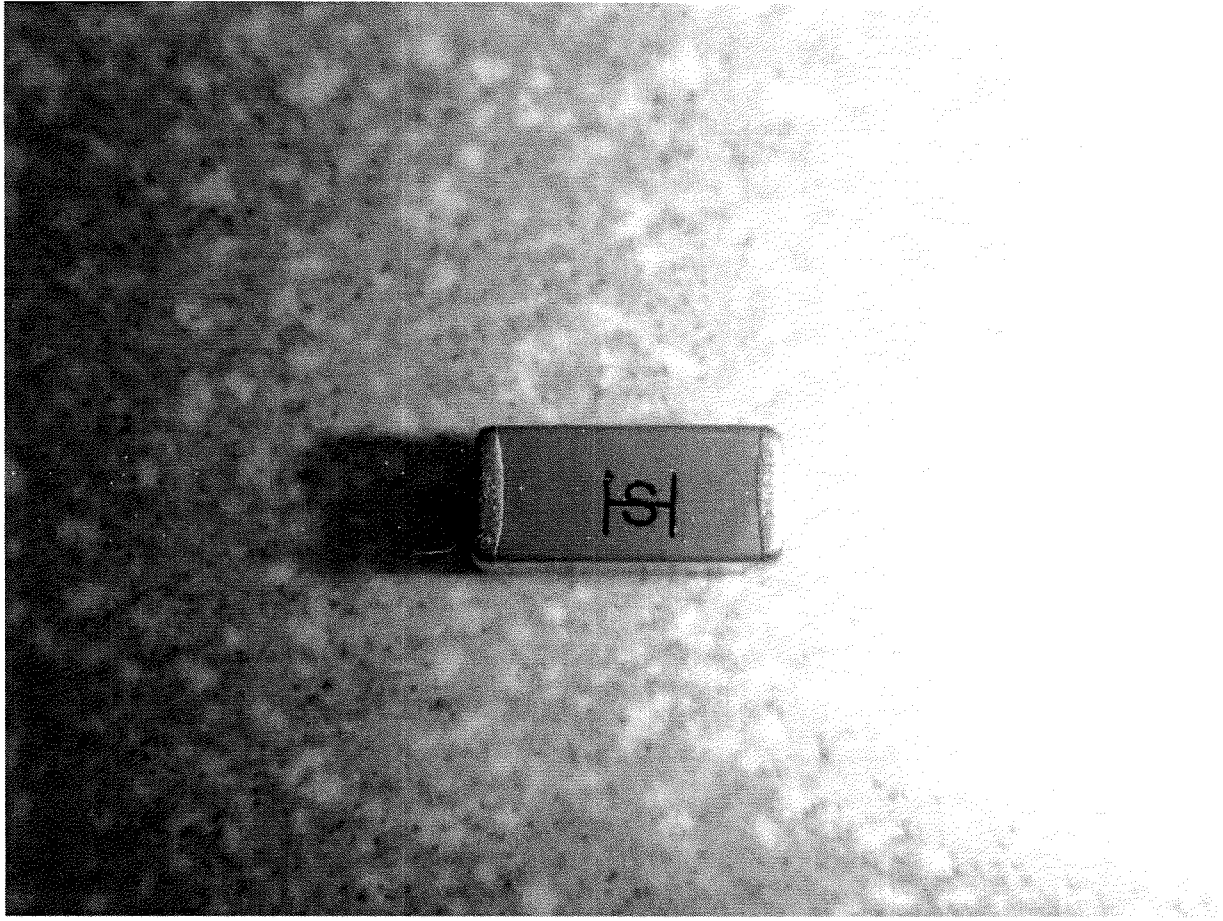
CONSTRUCTION DETAILS:

Type Designation	Capacitance (uuF)	Dielectric Material	Minimum Length (mm)	Minimum Width (mm)	Minimum Thickness (mm)	Minimum Endcap Separation (mm)
SCC2211	150	X7R	5.3	2.5	1.4	4.0
SCC2211	180	X7R	5.3	2.5	1.4	4.0
SCC2211	220	X7R	5.3	2.5	1.4	4.0
SCC2211	270	X7R	5.3	2.5	1.4	4.0
SCC2211	330	X7R	5.3	2.5	1.4	4.0
SCC2211	390	X7R	5.3	2.5	1.4	4.0
SCC2211	470	X7R	5.3	2.5	1.8	4.0
SCC2211	560	X7R	5.3	2.5	1.8	4.0
SCC2211	680	X7R	5.3	2.5	1.8	4.0
SCC2211	820	X7R	5.3	2.5	1.8	4.0
SCC2211	1000	X7R	5.3	2.5	1.8	4.0
SCC2211	1200	X7R	5.3	2.5	2.2	4.0
SCC2211	1500	X7R	5.3	2.5	2.2	4.0
SCC2211	1800	X7R	5.3	2.5	2.2	4.0
SCC2211	2200	X7R	5.3	2.5	2.2	4.0
SCC2220	150	X7R	5.3	4.6	1.8	4.0
SCC2220	180	X7R	5.3	4.6	1.8	4.0
SCC2220	220	X7R	5.3	4.6	1.8	4.0
SCC2220	270	X7R	5.3	4.6	1.8	4.0
SCC2220	330	X7R	5.3	4.6	1.8	4.0
SCC2220	390	X7R	5.3	4.6	1.8	4.0
SCC2220	470	X7R	5.3	4.6	1.8	4.0
SCC2220	560	X7R	5.3	4.6	1.8	4.0
SCC2220	680	X7R	5.3	4.6	1.8	4.0
SCC2220	820	X7R	5.3	4.6	1.8	4.0
SCC2220	1000	X7R	5.3	4.6	1.8	4.0
SCC2220	1200	X7R	5.3	4.6	1.8	4.0
SCC2220	1500	X7R	5.3	4.6	1.8	4.0
SCC2220	1800	X7R	5.3	4.6	1.8	4.0
SCC2220	2200	X7R	5.3	4.6	1.8	4.0

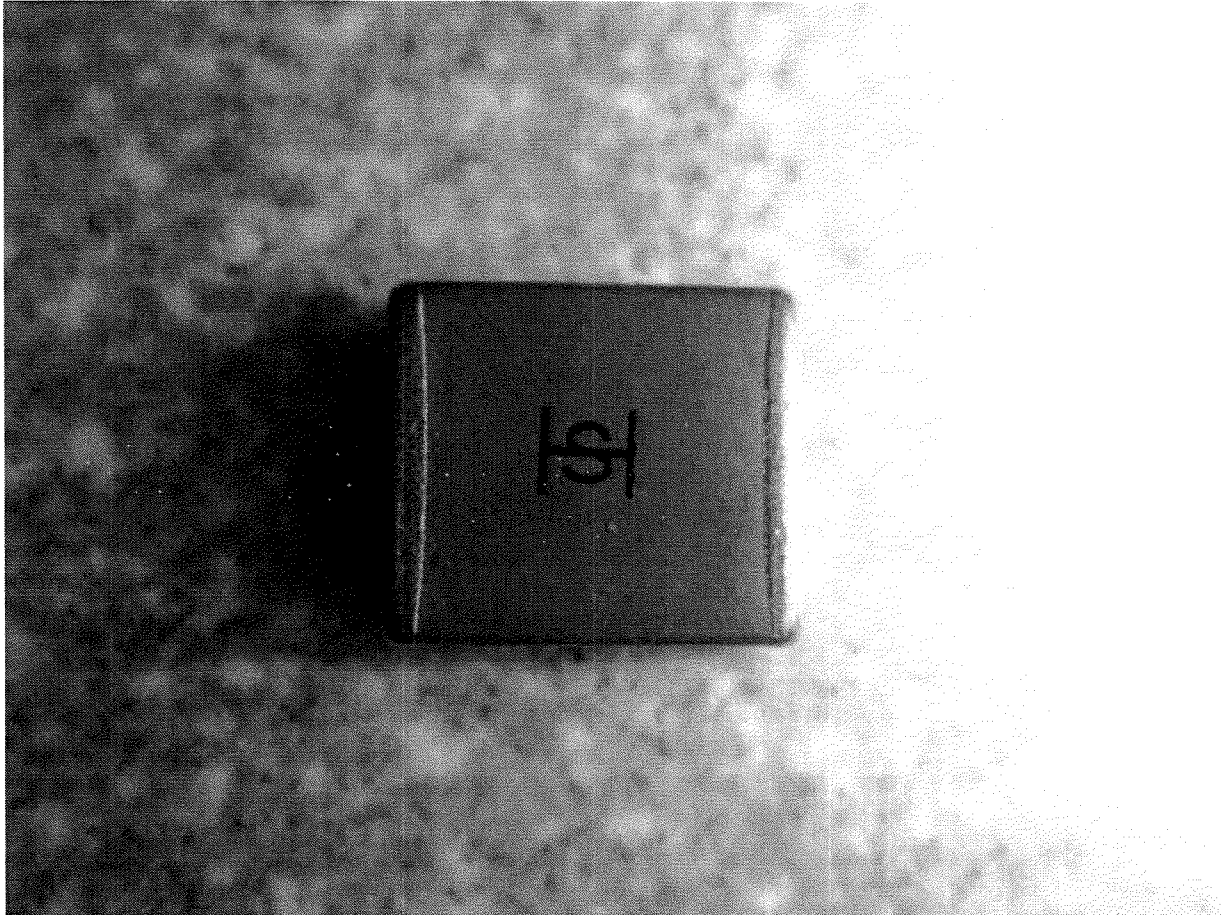
CERAMIC CAPACITOR, TYPE SCC2211 - FIG. 1

CERAMIC CAPACITOR, TYPE SCC2220 - FIG. 2

1. Marking (not as shown) - Recognized company's name and type designation marked on smallest shipping container. Voltage rating is 250 V ac, and the marking of rating is optional.
2. Dielectric - Ceramic.



C080709204



C080709205