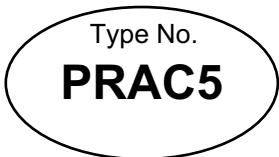


To _____

No. A391-040403N-01

Date 3rd Apr. '04



Data Sheet

PCS1900 Rx SAW Filter	
Application	: Rx Filter for PCS1900
Center Frequency	: 1960MHz
Size	: 2.0x1.4mm, 5pin-layout
Impedance	: 50-150ohms unbalance-balance
Part No.	: EFCH1960TCA1

Issued S. Suzuki
Check K. Nishimura

CIRCUIT COMPONENTS BUSINESS UNIT
MATSUSHITA ELECTRONIC COMPONENTS CO.,LTD
KADOMA, OSAKA, JAPAN

PCS1900 Rx SAW Filter

----- Unbalanced input and balanced output -----

Part No. :

Design No. : T1960XF8

Parameter		Frequency	Your request			Our preliminary spec.			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Passband			1930 ... 1990			1930 ... 1990			MHz
Insertion loss		1930 ... 1990MHz					1.5	2.3	dB
Ripple in passband		1930 ... 1990MHz					0.3	1.5	dB
Amplitude imbalance		1930 ... 1990MHz				-1.5	-0.7 +0.4	+1.5	dB
Phase imbalance		1930 ... 1990MHz				-10	-1 +2	+10	deg.
Attenuation	Att1	DC ... 1830MHz				30	40		dB
	Att2	1830 ... 1910MHz (T=+15 ... +60 deg.C)				12	16		dB
		1830 ... 1910MHz (T=-10 ... +80 deg.C)				10			dB
	Att3	2010 ... 2070MHz (T=+15 ... +60 deg.C)				12	16		dB
		2010 ... 2070MHz (T=-10 ... +80 deg.C)				10			dB
	Att4	2070 ... 2500MHz				20	22		dB
	Att5	2500 ... 4000MHz				25	31		dB
	Att6	4000 ... 6000MHz				20	48		dB
VSWR	Input	1930 ... 1990MHz					2.1	2.4	
	Output	1930 ... 1990MHz					2.1	2.4	
Input impedance (Single Ended)						50			Ohm
Output impedance (Differential)						150 // 22 nH			Ohm
Maximum drive level								13	dBm
Operating temperature						-10		+80	deg. C
Storage temperature						-40		+85	deg. C

PCS1900 Rx SAW Filter

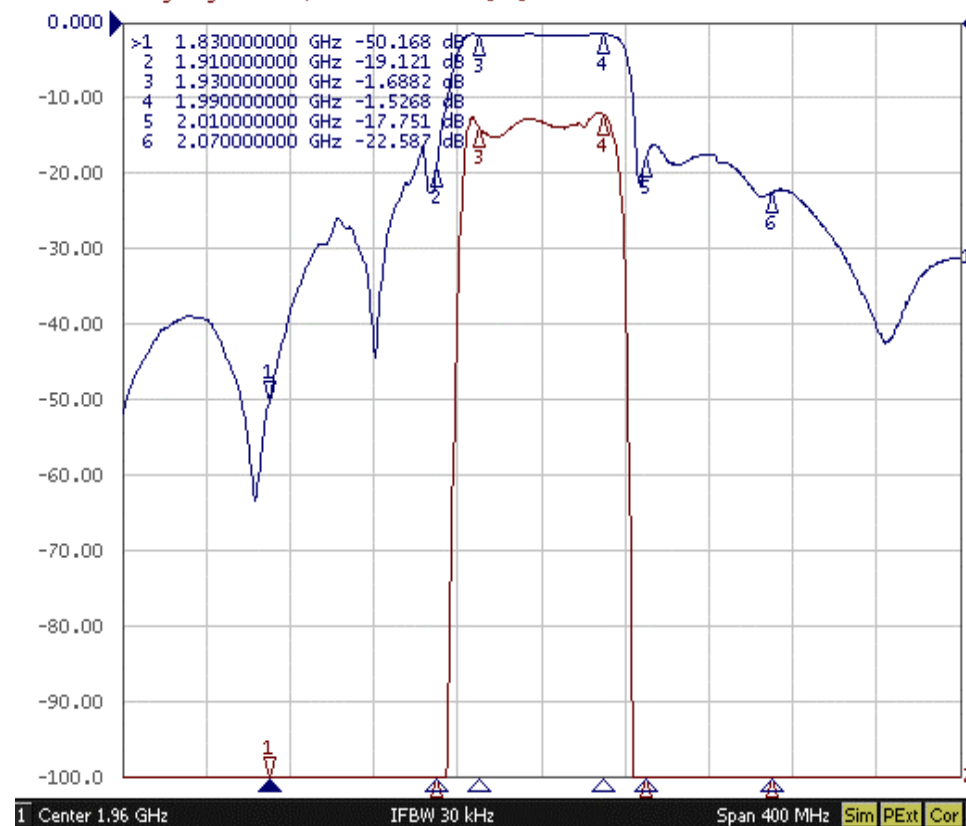
----- Unbalanced input and balanced output -----

Part No. :

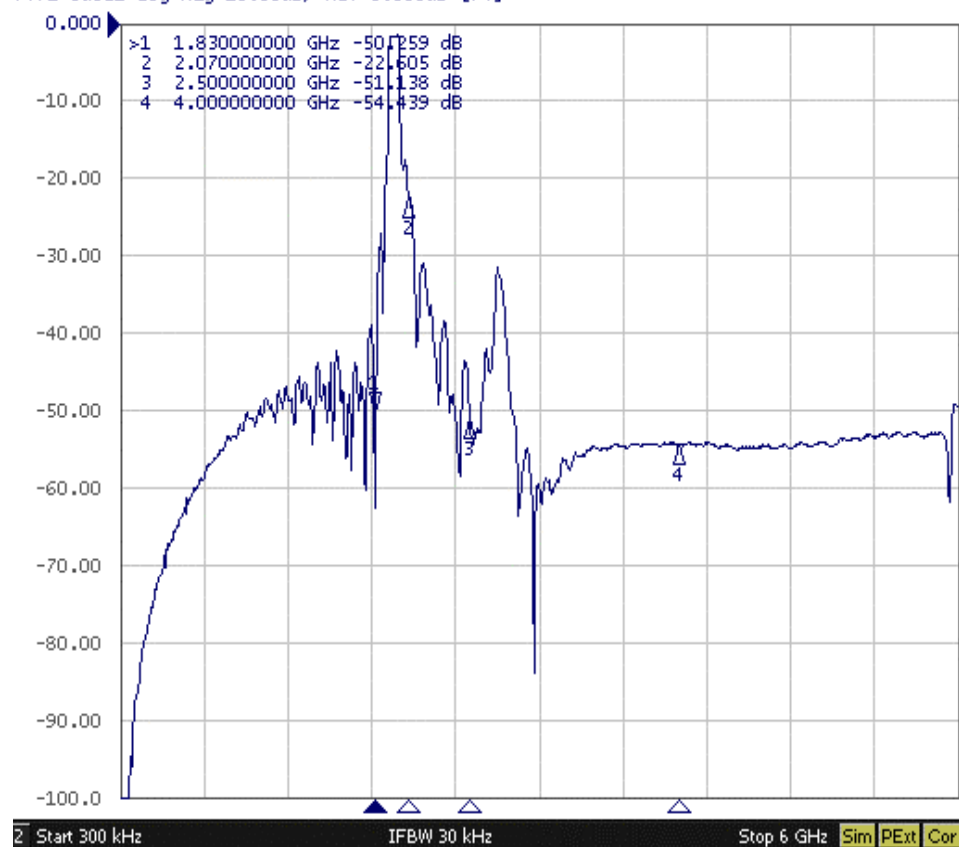
Design No. : T1960XF8

Jig Loss = 0.3dB

Tr1 Sds21 Log Mag 10.00dB/ Ref 0.000dB [F4]
Tr2 Sds21 Log Mag 1.000dB/ Ref -300.0mB [F4]



Tr1 Sds21 Log Mag 10.00dB/ Ref 0.000dB [F4]



PCS1900 Rx SAW Filter

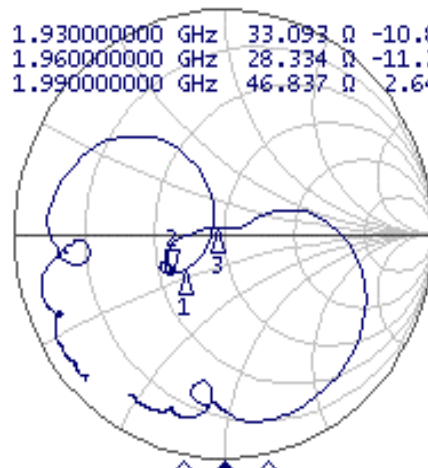
----- Unbalanced input and balanced output -----

Part No. :

Design No. : T1960XF8

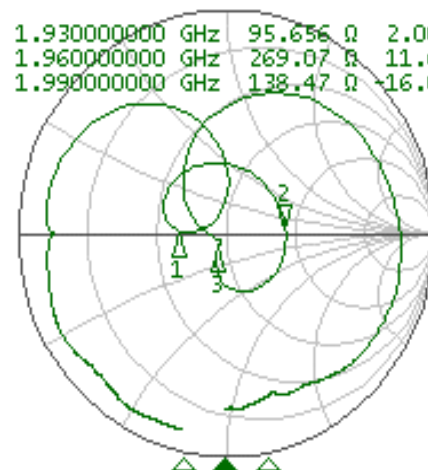
▶Tr1 Sss11 Smith (R+jX) Scale 1.000U [F4]

1	1.930000000	GHz	33.093	Ω	-10.871	Ω
>2	1.960000000	GHz	28.334	Ω	-11.215	Ω
3	1.990000000	GHz	46.837	Ω	2.6411	Ω

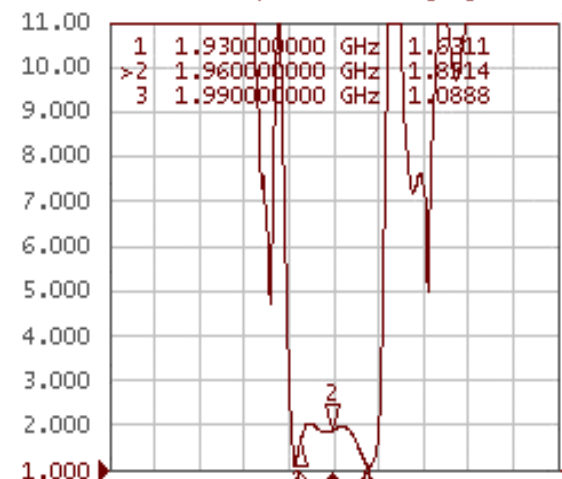


Tr3 Sdd22 Smith (R+jX) Scale 1.000U [F4]

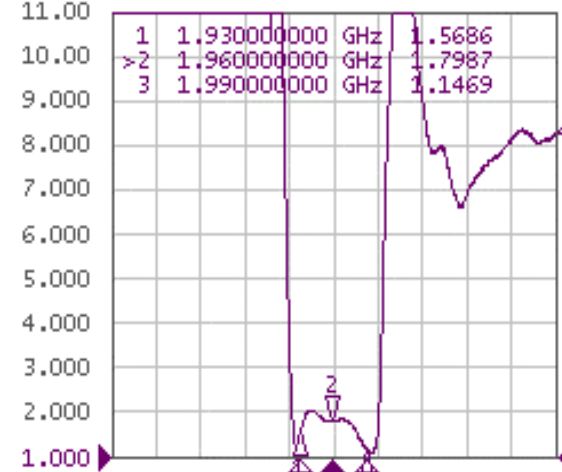
1	1.930000000	GHz	95.656	Ω	2.0013	Ω
>2	1.960000000	GHz	269.07	Ω	11.627	Ω
3	1.990000000	GHz	138.47	Ω	-16.053	Ω



Tr2 Sss11 SWR 1.000/ Ref 1.000 [F4]



Tr4 Sdd22 SWR 1.000/ Ref 1.000 [F4]



1 Center 1.96 GHz

IFBW 30 kHz

Span 400 MHz

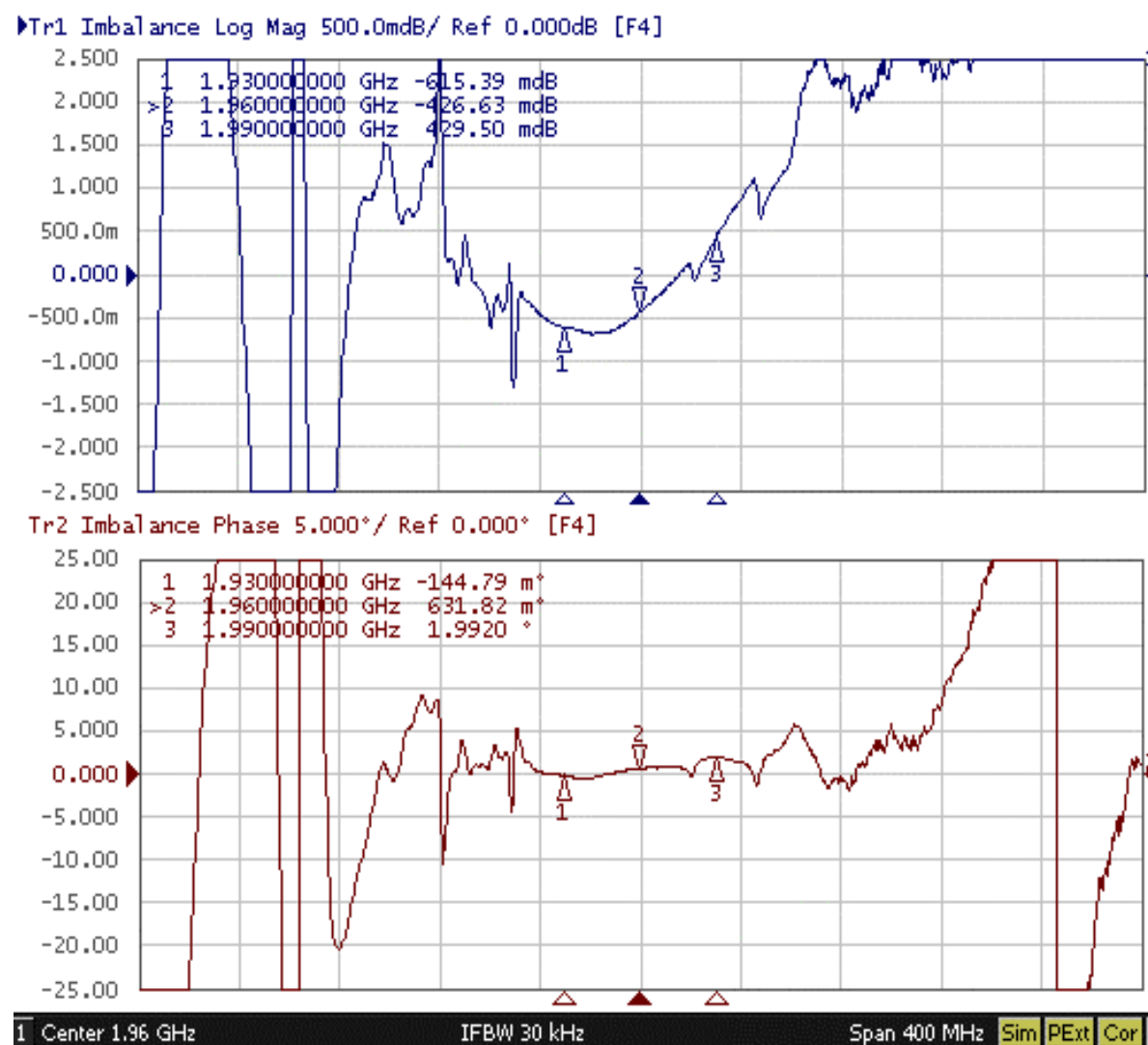
Sim PExt Cor

PCS1900 Rx SAW Filter

----- Unbalanced input and balanced output -----

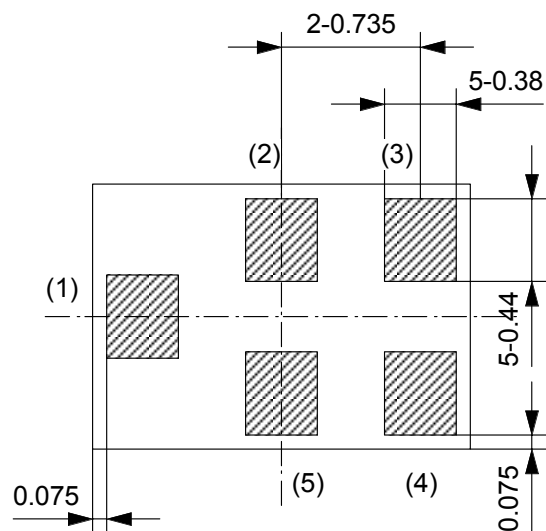
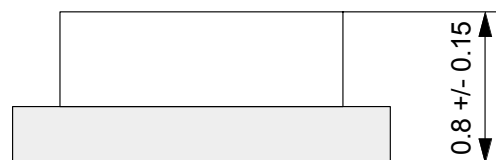
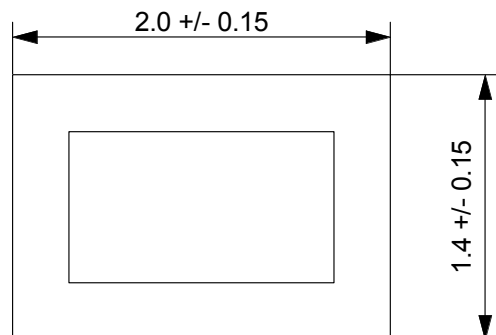
Part No. :

Design No. : T1960XF8



THIRD ANGLE PROJECTION

Tolerance : +/-0.05



- (1) Input
- (2) GND
- (3) Output
- (4) Output
- (5) GND

Note :
The design manufacturing process,
and Specification of this device
are subject to change without
notice.

DO NOT SCALE DRAWING

REVISIONS INDICATED BY Δ

ALL DIMENSIONS ARE IN MILLIMETERS

UNLESS OTHERWISE SPECIFIED

BASIC DIMENSIONS		TOLERANCE
UP TO	INCL	
TO	INCL	
TO	INCL	
TO	INCL	
ABOVE		

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ISSUE	REVISIONS		DATE
MATERIAL	FINISH	SCALE	
DESIGN			
DRAW			
CHECK			
APPROVAL			

DRAWING NO.

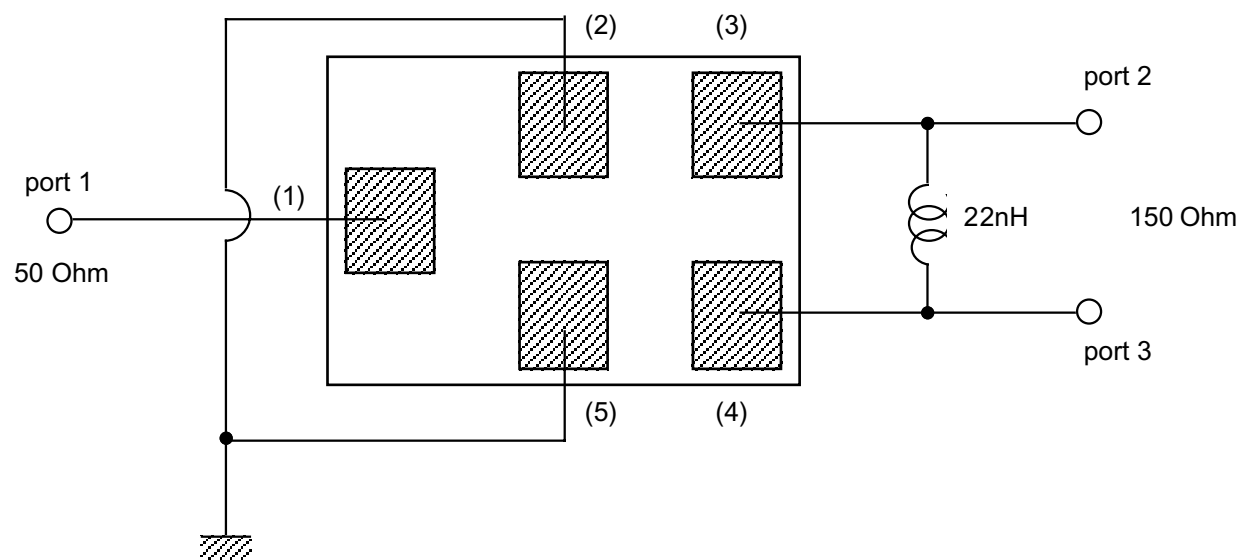
NAME _____

SAW Filter

TYPE NO.

**CERAMIC BUSINESS UNIT, LCR DEVICE COMPANY
MATSUSHITA ELECTRONIC COMPONENTS CO.,LTD.
KADOMA, OSAKA, JAPAN**

Measurement Circuit



Input impedance : 50 Ohm (Single ended)
Output impedance : 150 Ohm (Differential)

Fig. 2

ISSUE	REVISIONS	DATE
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MATERIAL	FINISH	SCALE
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DESIGN		
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DRAW		
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CHECK		
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APPROVAL		
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DRAWING NO.		
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NAME	TYPE NO.
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SAW Filter

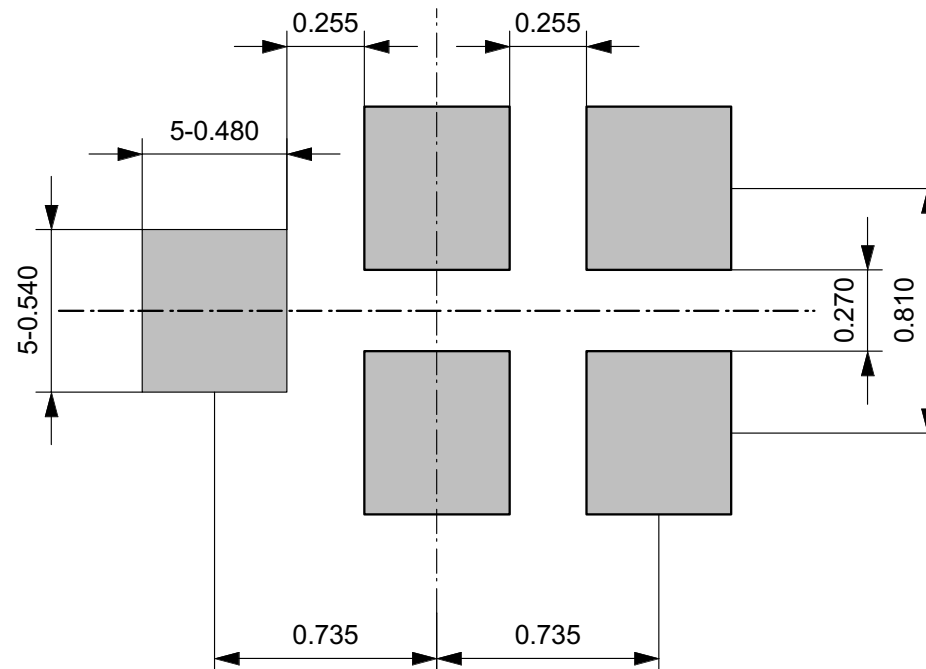
CERAMIC BUSINESS UNIT, LCR DEVICE COMPANY
MATSUSHITA ELECTRONIC COMPONENTS CO.,LTD.
KADOMA, OSAKA, JAPAN

THIRD ANGLE PROJECTION

UNLESS OTHERWISE SPECIFIED

BASIC DIMENSIONS		TOLERANCE
UP TO	INCL	
TO	INCL	
TO	INCL	
TO	INCL	
ABOVE		

Recommended land pattern



Note :
The design manufacturing process, and Specification of this device are subject to change without notice.

NAME	TYPE NO.
SAW Filter	
CERAMIC BUSINESS UNIT, LCR DEVICE COMPANY MATSUSHITA ELECTRONIC COMPONENTS CO.,LTD. KADOMA, OSAKA, JAPAN	

ISSUE	REVISIONS	DATE
MATERIAL	FINISH	SCALE
DESIGN		
DRAW		
CHECK		
APPROVAL		
DRAWING NO.		

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