

SPECIFICATION OF MODULATED FILTER

1.	Nominal Frequency	21.600 MHz
2.	Case type	0011
3.	Mode of oscillation	基頻
4.	Number of poles	2 極 (帶帶)
5.	Passband width	$\geq \pm 3.75$ kHz
6.	StopBand width	$\leq \pm 11$ kHz (at 18dB)
7.	Attenuation Guaranteed	20dB min ($F_0 + 750 \sim 1$ MHz) 50dB min ($F_0 - 200 \sim -1$ MHz)
8.	Ripple	1.0 dB max
9.	Insertion loss	2.5 dB max
10.	Terminating Impedance	900 Ω / 1pt
11.	Spurious Response	
12.	Operating temperature range	$-30^\circ\text{C} \sim +70^\circ\text{C}$
Remarks:		

SPECIFICATION OF QUARTZ CRYSTAL

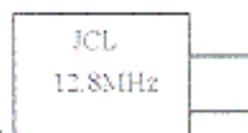
JAPAN COMMUNICAPTION LTD.

SPECIFICATIONS	980301		
DATE OF ISSUE	March 09.1998		
FREQUENCY	HOLDER TYPE	HC-49/T	
21.145 MHz	MODE	Fundamental	
	TEST SET	Saunders	
	LOAD CAPACITANCE	20 pF	
	DRIVE LEVEL	0.5 mW	
	OPERATING TEMP	-30 °C ~ +80 °C	
TEST ITEM	SPECIFICATIONS		
FREQUENCY TOLERANCE	+/- 20 ppm at 25°C		
FREQUENCY STABILITY	+/- 20 ppm in -30°C ~ +60°C		
EQUIVALENT RESISTANCE	Less than 20 ohm		
STATIC CAPACITANCE	Less than 7 pF		
INSULATION RESISTANCE	More than 500M ohm DC100V		
SEAL TEST	U.S. MILITARY SPECIFICATIONS, MIL-C-3098		
SHOOK TEST	U.S. MILITARY SPECIFICATIONS, MIL-C-3098		
OUTSIDE VIEW	U.S. MILITARY SPECIFICATIONS, MIL-C-3098		
SPURIOUS FREQUENCY			
MARKING	REMARKS		
	<p align="right">RADIOSHACK, A DIV OF TANDY CORP. FCC ID: AAC01901210 EXHIBIT #: <u>115</u></p> <p align="center">ELFA LIMITED</p>		

SPECIFICATION OF QUARTZ CRYSTAL

JAPAN COMMUNICATION LTD.

SPECIFICATIONS	94617	
DATE OF ISSUE	6,17,1994	
FREQUENCY	HOLDER TYPE	UM - 1
12.8 MHz	MODE	Fundamental
	TEST SET	TS-330
	LOAD CAPACITANCE	12 pF
	DRIVE LEVEL	1 mW
	OPERATING TEMP	-30 °C ~ -80 °C
TEST ITEM	SPECIFICATIONS	
FREQUENCY TOLERANCE	± 5 ppm at 25°C	
FREQUENCY STABILITY	± 5 ppm in -20°C ~ -60°C	
EQUIVALENT RESISTANCE	Less than 35 ohm	
STATIC CAPACITANCE	Less than 7 pf	
INSULATION RESISTANCE	More than 500M ohm DC100V	
SEAL TEST	U.S. MILITARY SPECIFICATIONS, MIL-C-3098	
SHOOK TEST	U.S. MILITARY SPECIFICATIONS, MIL-C-3098	
OUTSIDE VIEW	U.S. MILITARY SPECIFICATIONS, MIL-C-3098	
SPURIOUS FREQUENCY		
MARKING	REMARKS	



ELFA LIMITED

RADIOSHACK, A DIV OF TANDY
CORP.
FCC ID: AAO01901210
EXHIBIT #: 11C

RALTRON

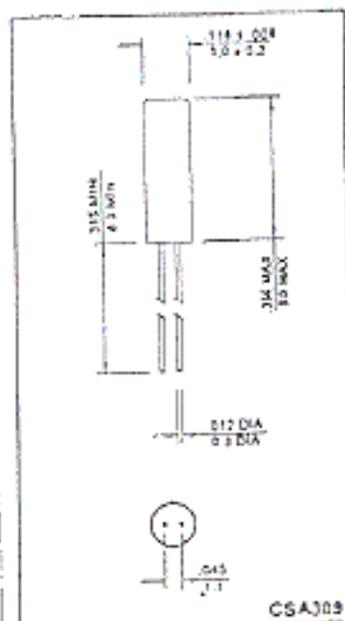
02 DEC 1996

Raltron Electronics Corp.
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 Fax (305) 594-3973

QUARTZ CRYSTAL UNITS

SPECIFICATIONS

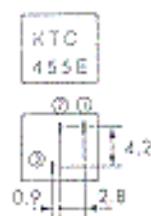
RALTRON PART NUMBER:	CSA-309-4.194304-16
HOLDER TYPE / ITEM:	CYLINDRICAL PACKAGE
NOMINAL FREQUENCY :	4.194304MHz
FREQUENCY TOLERANCE:	+/-30PPM
TEMPERATURE CHARACTERISTICS:	+/-50PPM
OSCILLATION MODE:	FUNDAMENTAL
LOAD CAPACITANCE:	16 PF
EQUIVALENT SERIES RESISTANCE :	150 ohm MAX.
SHUNT CAPACITANCE:	5 PF MAX
OPERATION TEMP. RANGE:	-20c -- +60c
DRIVE LEVEL:	50 +/-5uW
INSULATION RESISTANCE:	500 M OHM/DC100 V

DIMENSIONS

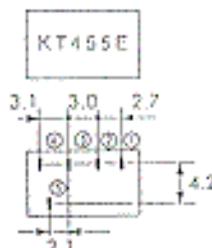
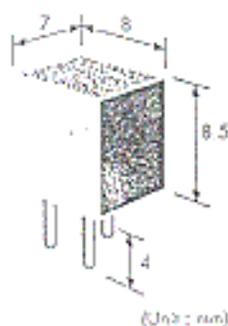
RADIO Shack, A DIV OF TANDY
 CORP.
 FCC ID: AAO01901210
 EXHIBIT #: 11D

455□ Series

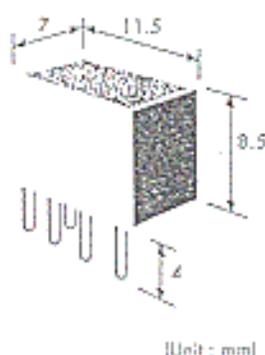
Dimension in mm (+/- 5% max.)



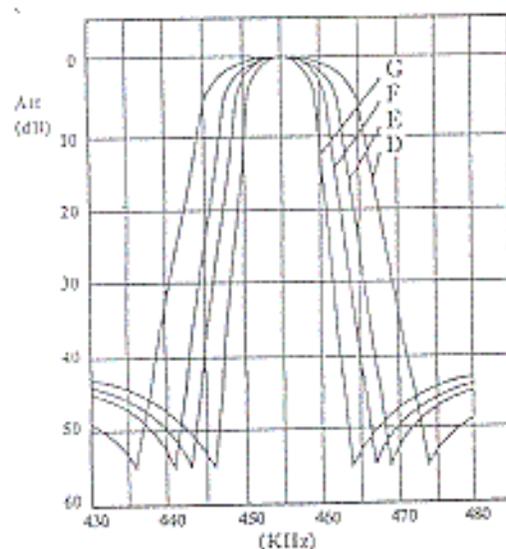
Connection
 ① Input
 ② Ground
 ③ Output



Connection
 ① Input
 ② Ground
 ③ Output

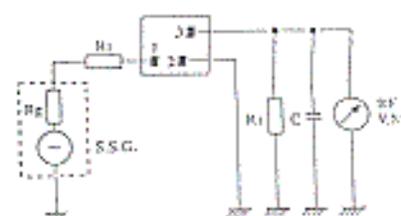
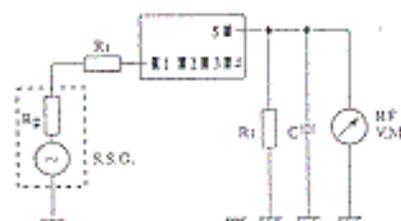


Frequency Characteristics:



Freq. accuracy @ 25°C: +/- 5%
 Operating Temperature: -20 ~ +60°C

Test Cct:



$R1 + Ng = R2$

Capacitor < 50 pf

Electrical Features

Stop band attenuation is specified to within 455 +/- 0.1 KHz
 Attenuation band width is specified by the width of:

KTC : 40 db and KT : 50 db

PART NUMBER / TYPE		6 db BW (KHz) min.	Att.BW (KHz) max.	Stop Band Attn. (db) min.		Insertion Loss(db) max.	In/Output Impedance (K.Ohm)
KTC	KT			KTC	KT		
KTC455B	KT455B	+/-15	+/-30	27	35	4	1.5
KTC455C	KT455C	+/-12.5	+/-24	27	35	4	1.5
KTC455D	KT455D	+/-10	+/-20	27	35	4	1.5
KTC455E	KT455E	+/-7.5	+/-15	27	35	6	1.5
KTC455F	KT455F	+/-6	+/-12.5	27	35	6	2
KTC455G	KT455G	+/-4.5	+/-10	25	35	6	2
KTC455H	KT455H	+/-3	+/-9	25	35	6	2
KTC455I	KT455I	+/-2	+/-7.5	25	35	6	2



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