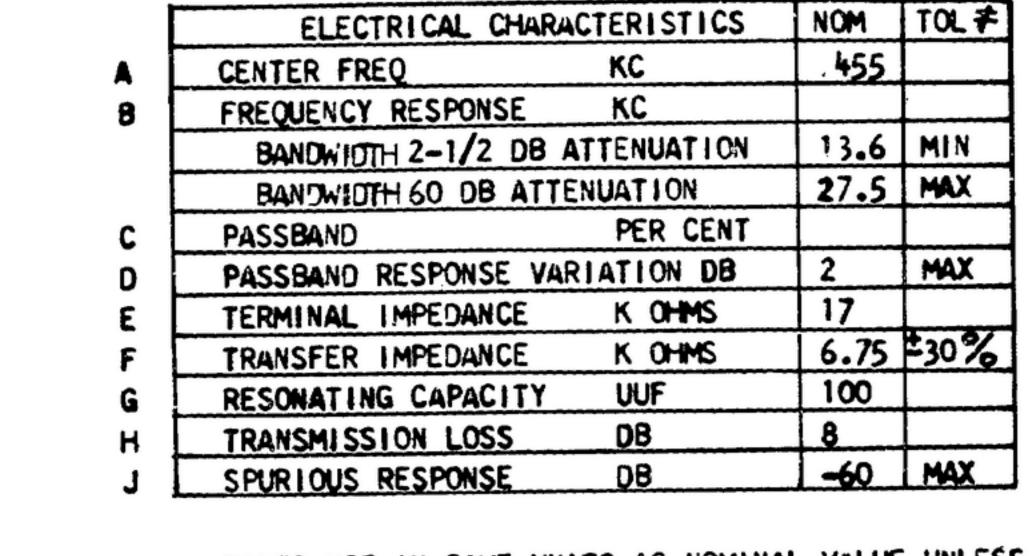
NY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR COR PORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFAC DATA MARKED BY AN ASTERISK (*) ARE FOR INFORMATION ONLY, CONTRACTOR MAY, AT HIS OPTION, DEVIATE FROM THESE DETAILS

(cg)



ELECTRICAL REQUIREMENTS (AT +25 C):

1	ADDITE	ADDITIONAL SELECTIVITY		
	AND ATTENUATION DATA			
	FREQ KC	90	TOL	
	448.2	2.5	· MAX	
	461.8	2.5	MAX	
	441.00	60	MIN	
	469.00	60	MIN	
2	ATTEN	BW (KC)	TOL	
	6 DB	16	MAX	
	20 DB	17.5	MAX	
	40 08	21.5	MAX	

1 DB INCREASE

m गुचिए TERMINALS SHALL BE LOCATED WITHIN BISECTED AREA

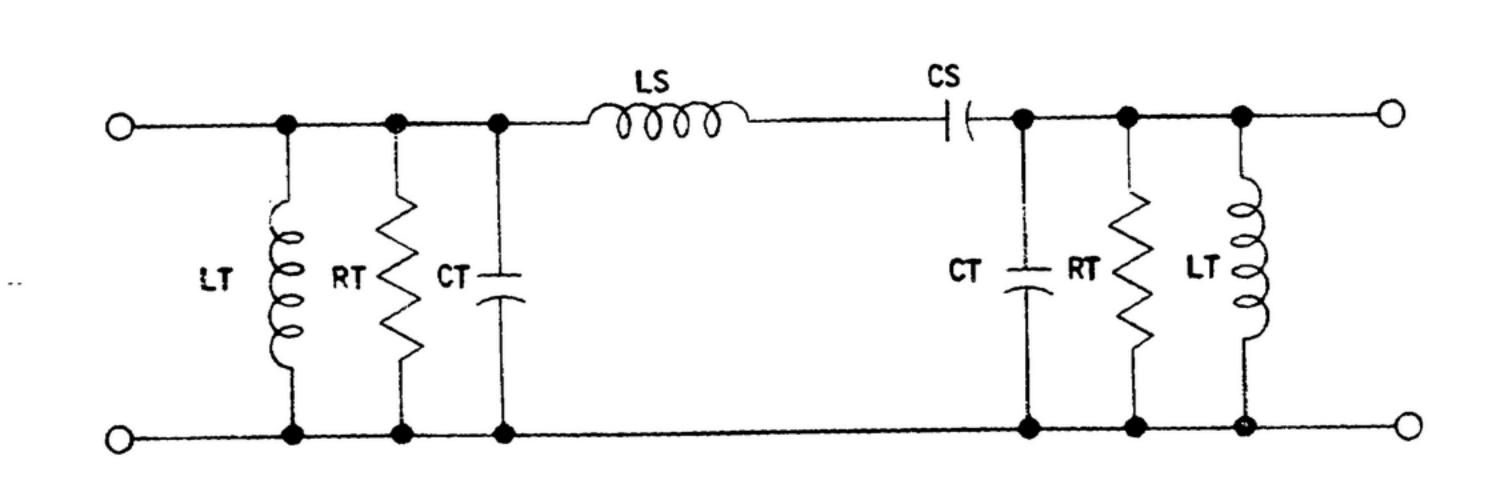
.125 DIA -

2 HOLES

145"MS4 7214 I S.B. CO. NO. 75" 72779

GROUND TERMINALS NOT INSULATED TYP BOTH ENDS ₹ 1.125 ₹

NAMEPLATE



TOLERANCE IN SAME UNITS AS NOMINAL VALUE UNLESS OTHERWISE INDICATED. CENTER FREQUENCY BY DEFINITION, IS 455 KC, SEE TABLE IA PASSBAND, BY DEFINITION IS THE FREQUENCY BAND BETWEEN 449 KC AND 461 KC. SEE TABLE 1C. TERMINAL IMPEDANCE: THE MECHANICAL FILTER MAY BE DRIVEN AND LOADED IN ANY COMBINATION OF PARALLEL OR SERIES RESONANCE: THE IMPEDANCE LISTED IN TABLE 1E IS THE INPUT AND OUTPUT VALUE MEASURED AT 455 KC UNDER PARALLEL RESONANT CONDITIONS UNLESS OTHERWISE SPECIFIED. TRANSFER IMPEDANCE IS DEFINED AS THE RATIO OF THE SIGNAL VOLTAGE ACROSS THE OUTPUT TERMINALS TERMINATED ONLY WITH RESONATING CAPACITY, TO THE INPUT SIGNAL CURRENT, MEASURED AT 455 KC. THE MECHANICAL FILTER IS VIRTUALLY SYMMETRICAL WITH RESPECT TO TERMINAL CHARACTERISTICS PERMITTING ARBITRARY DESIGNATION OF INPUT AND OUTPUT TERMINALS. SEE TABLE 1F. RESONATING CAPACITANCE IS THE TOTAL EXTERNAL CAPACITANCE INCLUDING TUBE, STRAY, AND WIRING CAPACITANCE REQUIRED TO RESONATE THE INPUT AND OUTPUT TRANSDUCER COILS FOR PROPER OPERATION. DEVIATIONS FROM THE PROPER CAPACITANCE WILL ALTER THE ELECTRICAL CHARACTERISTICS OF TABLE 1. THE VALUE SPECIFIED IS NOMINAL; FILTERS MUST BE RESONATED AT 455 KC FOR OPTIMUM PERFORMANCE. FILTERS WILL RESONATE IN THE RANGE 80 TO 120 UUF. TRANSMISSION LOSS IS DEFINED AS 20 LOG 10(EIN/EOUT); MEASUREMENT MADE AT 455 KC DRIVEN FROM

PART MAY BE TYPE NO. F455N-160 (*526 9162 009) AS SUPPLIED BY COLLINS RADIO CO., CEDAR

IOWA, OR EQUAL, PROVIDING IT MEETS THE FOLLOWING REQUIREMENTS AND DIMENSIONS SHOWN

TABLE

MAX

A CONSTANT CURRENT SOURCE AND WITH THE MECHANICAL FILTER OUTPUT TERMINATED IN THE PROPER RESONATING CAPACITY ONLY. SEE TABLE 1H.

DIELECTRIC STRENGTH: UNIT SHALL WITHSTAND A POTENTIAL OF 500 VOLTS RMS FROM TRANSDUCER COILS TO FRAME FOR A PERIOD OF NOT LESS THAN FIVE SECONDS AND NOT MORE THAN ONE MINUTE. DIELECTRIC TESTS SUBSEQUENT TO PRIME CONTRACTORS COMPONENT PRODUCTION INSPECTION TEST SHALL BE PERFORMED AT 90 PER CENT OF THE SPECIFIED VALUE.

RECOMMENDED OPERATING PARAMETERS: SIGNAL INPUT VOLTAGE: O TO 7 VOLTS RMS

DIRECT CURRENT: SHUNT FEED IS NECESSARY TO ELIMINATE OC CURRENT IN TRANSDUCER COILS. DC CURRENT IN TRANSDUCER COILS WILL ALTER THE ELECTRICAL CHARACTERISTICS OF TABLE 1. DC VOLTAGE: 300 VDC MAXIMUM POTENTIAL ON TRANSDUCER COILS

SIGNAL SOURCE & LOAD IMPEDANCE: MECHANICAL FILTERS ARE NORMALLY USED INTERSTAGE, PLATE TO GRID. IT IS DESIRABLE TO DRIVE THE FILTER FROM A CONSTANT CURRENT SOURCE AND WORK IT INTO A HIGH LOAD IMPEDANCE SUCH AS A GRID INPUT, UNDER PARALLEL RESONANT CONDITIONS.

ENVIRONMENTAL REQUIREMENTS:

OPERATING TEMPERATURE RANGE: -40° C TO +85° C. ELECTRICAL CHARACTERISTICS DEVIATIONS FROM SPECIFIED + 25° C LIMITS OF ELECTRICAL REQUIREMENTS ARE AS FOLLOWS:

± 10 PPM/C CENTER FREQUENCY BANDWIDTH

* 5 PER CENT PASSBAND RESPONSE VARIATION **±** 10 PER CENT TRANSFER IMPEDANCE

TEMPERATURE RANGE, NON-OPERATING: -65° C TO +105° C

ALTITUDE: UP TO 50,000 FEET VIBRATION: UNIT SHALL MEET THE ELECTRICAL REQUIREMENTS SUBSEQUENT TO VIBRATION TEST IN ACCORDANCE WITH MIL-STD-202, METHOD 201, TEST CONDITION B. MOTION SHALL BE APPLIED IN EACH OF THE THREE MUTUALLY PERPENDICULAR PLANES.

SHOCK: UNIT SHALL BE CAPABLE OF WITHSTANDING A TOTAL OF 18 IMPACT SHOCKS OF 15 G'S IN ACCORDANCE WITH MIL-STD-202, METHOD 202. THE IMPACT SHOCKS SHALL BE APPLIED ALONG THE PRINCIPAL AXES, THREE SHOCKS IN EACH DIRECTION ALONG EACH AXIS. UNIT SHALL THEN MEET THE ELECTRICAL REQUIREMENTS.

REVISIONS DESCRIPTION - ADDED APPL SM-D-343620 AUG 21582-PG-61 RETRACED, NO CHANGE CHANGED LOCATION OF GROUND LUG 23 " 1582**-PC-61** AND PICTURE TO AGREE WITH PART REND C3 (1) NOTE I, TYPE NO. REV(Z) DIM. WAS 17/6 (3) GRO TERM. REV.

MOISTURE RESISTANCE: UNIT SHALL MEET THE ELECTRICAL REQUIREMENTS AND THERE SHALL BE NO SIGNS OF EXTERNAL PHYSICAL DETERIORATION SUBSEQUENT TO TEN DAY HUMIDITY TEST IN ACCORDANCE WITH MIL-STD-202, METHOD 106.

CORROSION RESISTANCE: UNIT SHALL WITHSTAND SALT SPRAY IN ACCORDANCE WITH MIL-STD-202, METHOD 101, TEST CONDITION B. AT THE COMPLETION OF TEST AND SUBSEQUENT TO GENTLE RINSING IN TAP WATER (37.8° C MAX TEMP) AND A LIGHT BRUSHING IF NECESSARY. THE EXTERIOR SURFACES SHALL SHOW NO SIGNS OF EXCESSIVE CORROSION AND ALL MARKINGS SHALL REMAIN LEGIBLE.

MECHANICAL REQUIREMENTS:

CONSTRUCTION: HERMETICALLY SEALED

CASE: CARTRIDGE BRASS. SEE DRAWING FOR DIMENSIONAL DETAILS.

FINISH: M352 PER SPEC MIL-F-14072.

NAMEPLATE: A SUITABLE METAL FOIL OR DECALCOMANIA NAMEPLATE SHALL BE ATTACHED TO THE FILTER AND SHALL INCLUDE THE FOLLOWING DATA:

> CONTRACTORS TYPE SERIAL NUMBER OR DATE CODE STAMP CONTRACTORS PART NUMBER

SILK SCREENING OR RUBBER STAMPED IDENTIFICATION DATA MAY BE USED IN LIEU OF A NAMEPLATE. THE NAME PLATE SHALL REMAIN FIRMLY ATTACHED AND LEGIBLE AFTER SUBJECTION TO THE ENVIRONMENTAL REQUIREMENTS. MARKINGS SHALL MEET THE TEST REQUIREMENTS OF SPEC MIL-M-13231.

- * PRODUCTION TEST REQUIREMENTS BY THE PRIME CONTRACTOR SHALL CONSIST OF THE FOLLOWING PRODUCTION INSPECTION AND TYPE TESTS.
- * PRODUCTION INSPECTION TESTS: ALL UNITS SHALL BE TESTED FOR THE FOLLOWING:
 - A VISUAL INSPECTION FOR MECHANICAL REQUIREMENTS AND WORKMANSHIP
 - B ELECTRICAL REQUIREMENTS
- * PRODUCTION TYPE TESTS: A SMALL PERCENTAGE OF UNITS TO BE DETERMINED BY QUALITY CONTROL DEPARTMENT OF THE PRIME CONTRACTOR MAY BE SUBJECTED TO THE FOLLOWING TESTS IN ADDITION TO THOSE OF THE ELECTRICAL REQUIREMENTS TO EVALUATE THE QUALITY OF THE COMPONENT:
 - A OPERATING TEMPERATURE RANGE
 - B VIBRATION
 - C SHOCK
 - D MOISTURE RESISTANCE
 - E CORROSION RESISTANCE

LIST OF MATERIAL DEPARTMENT OF THE ARMY UNLESS OTHERWISE SPECIFIED CONTRACTOR SALVACE CLOAR RAMOS 1074 DIMENSIONS ARE IN INCHES U. S. ARMY SIGNAL MATERIEL TOLERANCES ON 14214-PH-51-93 SUPPORT AGENCY FRACTIONS DECIMALS ANGLES ± 1/64 ±.005 ± 10 FILTER-MECHANICAL SIGNAL CORPS SM-D-248862 CHECKED BY BB NEXT ASSY CODE 80063 APPROVED BY DATE 18 MAR 58 APPLICATION

WHEN REFERRING TO THIS DRAWING STATE DRAWING NO., APPLICABLE ISSUE SYMBOL, IF ANY, AND DATE

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