

NOTE: The document identifier and heading have been changed on this page to reflect that this is a performance specification. There are no other changes to this document. The document identifier on subsequent pages has not been changed, but will be changed the next time this document is revised.

MIL-PRF-27/76C
 9 July 1981
 SUPERSEDING
 MIL-T-27/76B
 8 April 1980

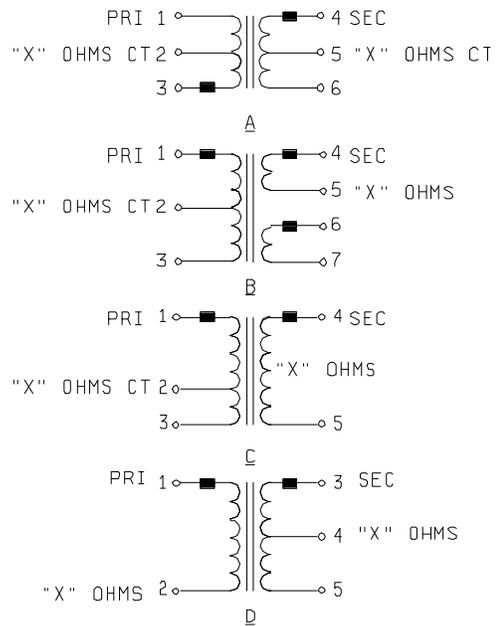
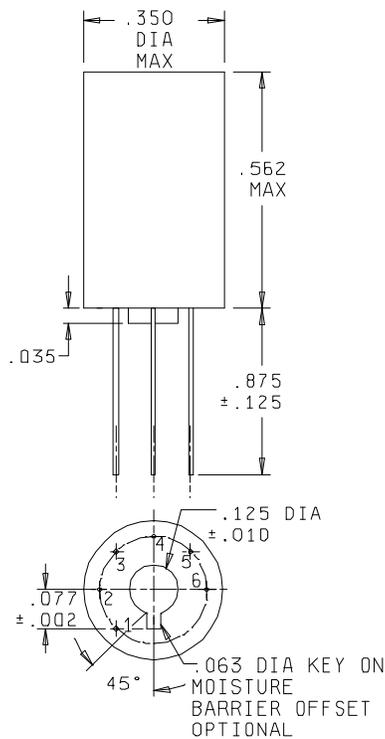
PERFORMANCE SPECIFICATION SHEET

TRANSFORMERS, AUDIO FREQUENCY, TF5R21ZZ

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for acquiring the transformers described herein shall consist of this specification and the latest issue of Specification MIL-T-27.

INCHES	MM
.002	0.05
.010	0.25
.031	0.79
.035	0.89
.063	1.60
.077	1.96
.125	3.18
.350	8.89
.562	14.27
.875	22.22



WORKING VOLTAGE (PEAK): 50V
 ALTITUDE: 150,000 FT MAX
 (SEE TABLE I FOR VALUE OF "X")

CIRCUIT DIAGRAM AND MARKING

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only and are based upon 1.00 inch = 25.4 mm.
3. Marking shall be on the side of the case.
4. Terminals are spaced the same as "TO-5" transistor and micrologic elements.
5. Terminal one located 45° from centerline, as noted.
6. Primary and secondary electrical values shall be marked as specified in table I, as applicable.

FIGURE 1. Dimensions and configuration.

Ⓢ denotes changes

REQUIREMENTS: (When numbers in parentheses, i.e. (1-2) are used, they indicate the winding and the extreme terminals of the winding).

Electrical ratings: See table I.

Working voltage (peak): 50 volts.

Frequency range: 300 hertz to 20 kilohertz.

Design and construction:

Dimensions and configuration: See figure 1.

Duty cycle: Continuous.

Case: Encapsulated.

Altitude: 150,000 feet, maximum.

Terminals: Dumet wire leads.

Material: Tin-lead plated type D4 in accordance with MIL-STD-1276.

Diameter: 0.016.

Length: 0.875 ± 0.125 inch.

Weight: 3.55 grams, maximum.

Operating temperature range: -55° to $+105^{\circ}$ C.

Terminal strength: MIL-STD-202, method 211, test condition A, 2 pounds.

Dielectric withstanding voltage:

At sea level: 100 volts rms.

At barometric pressure: 100 volts rms.

Electrical characteristics: See table II.

No load (centertap unbalance only): ± 1 percent with 5 volts, 5 kilohertz across the primary.

Harmonic distortion: Total harmonic content of the output shall be a maximum 3 percent at the specified power level and primary dc current (see table I).

Insertion loss: At the specified power level (see table I), the insertion loss shall be a maximum of 3.5 dB.

Frequency response: ± 3 dB at the rated source and load impedances (see table II) with 1 milliwatt level output and a reference frequency of 1 kilohertz.

Vibration (high-frequency): MIL-STD-202, method 204, test condition D.

Marking location: See figure 1.

Part number: M27/76-(dash number from table I).

TABLE I. Electrical ratings. 1/ 2/

Dash No.	Circuit diagram (see figure 1)	Primary impedance (ohms)	Secondary impedance ^{3/} (ohms)	Primary DC current (mA)	Power Level at 1 kHz (max) (mW)	Primary DC resistance ±25% (ohms)	Secondary DC resistance ±25% (ohms)
01	A	200,000 CT (1-3)	1,000 CT (4-6)	0	25	9000	100
02	A	20,000 CT 30,000 CT (1-3)	800 CT 1,200 CT (4-6)	0.5	50	830	115
03	A	10,000 CT 12,000 CT (1-3)	10,000 CT 12,000 CT (4-6)	1	100	975	1175
04	D	10,000 12,000 (1-2)	2,000 2,500 (3-5)	1		780	190
05	B	10,000 CT 12,000 CT (1-3)	2,000 SPLIT 2,400 SPLIT (4-7)	1		560	230
06	A	10,000 CT 12,000 CT (1-3)	1,500 CT 1,800 CT (4-6)	1		780	126
07	C	1,000 CT 1,200 CT (1-3)	50 60 (4-5)	3		115	8

1/ Qualification testing and approval to M27/76-01 shall be sufficient to grant qualification approval to M27/76-02 through M27/76-07.

2/ Impedance values written one above the other indicate a range of matching impedances over which the parts will give satisfactory performance as long as the impedance ratio is maintained.

3/ Where windings are listed as SPLIT, one-fourth of the listed impedance is available by paralleling the winding.

TABLE II. Electrical characteristics.

Dash No.	Frequency response: +3 dB at 300 Hz to 20 kHz and 1 mW		Resonance resonant frequency C (min) (kHz)	Polarity: Additive with terminals (below) connected
	Z_S (ohms)	Z_L (ohms)		
01	200,000 (1-3)	1,000 (4-6)	100	3 and 4
02	20,000 (1-3)	800 (4-6)	100	3 and 4
03	10,000 (1-3)	10,000 (4-6)	400	3 and 4
04	10,000 (1-2)	2,000 (3-5)	400	2 and 3
05	10,000 (1-3)	2,000 (4-7)	400	(3-4) and (5-6)
06	10,000 (1-3)	1,500 (4-6)	400	3 and 4
07	1,000 (1-3)	50 (4-5)	400	3 and 4

Custodians:
 Army - ER
 Navy - EC
 Air Force - 85

Preparing activity:
 Army - ER
 (Project 5950-0581-13)

Review activities:
 Army - MI
 Navy - SH, OS
 Air Force - 11, 17, 99
 DLA - ES

User activities:
 Army - AR
 Navy - MC, AS
 Air Force - 19

Agent:
 DLA - ES