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.

INCH-POUND

MIL-PRF-27/300C
17 May 1990
SUPERSEDING
MIL-T-27/300B
5 July 1988

PERFORMANCE SPECIFICATION SHEET

TRANSFORMERS, POWER, STEPDOWN, TF4R03

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

The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation: MIL-T-27.

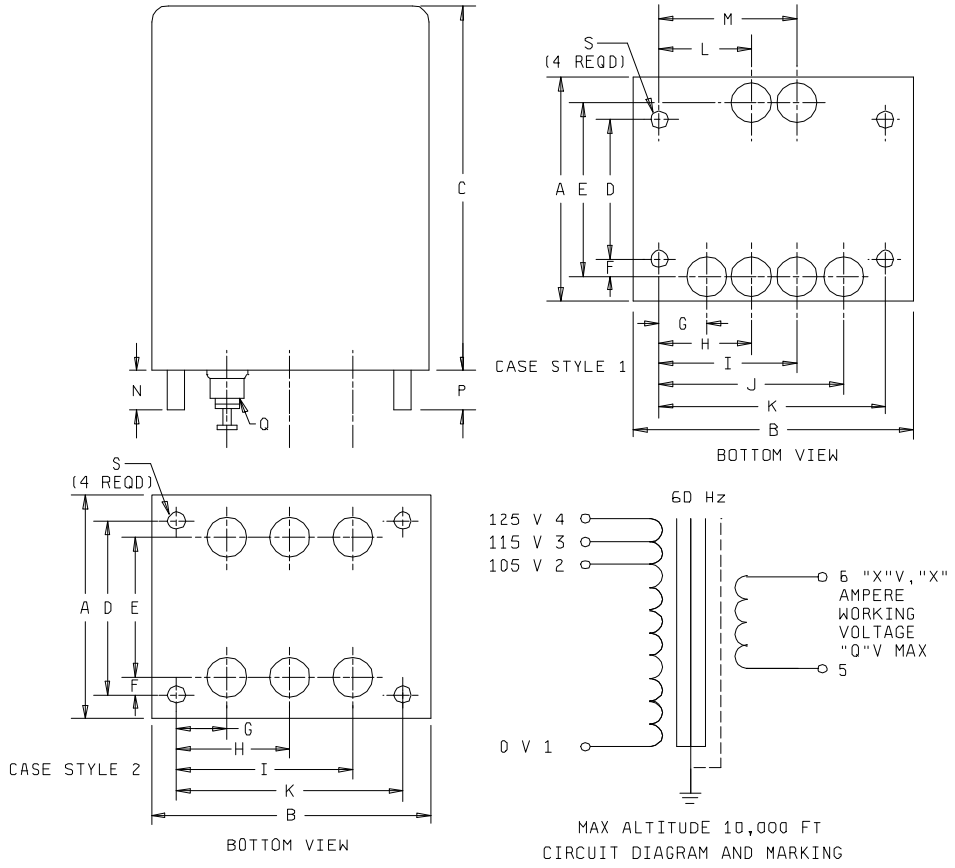

FIGURE 1. Dimensions and configurations.

Ⓒ denotes changes

Dash number	Type designation	Case style	A	B	C	D	E	F	G	H	I	J	K	L	M
-01	TF4R03EB	2	1.812	1.938	2.438	1.250	1.124	.063	.376	.688	1.000	N/A	1.375	N/A	N/A
-02	TF4R03GB	1	2.375	2.750	2.812	1.750	1.750	N/A	.500	.874	1.250	1.624	2.125	.874	1.250
-03	TF4R03JB	1	3.062	3.562	3.875	2.125	2.094	.156	.750	1.125	1.500	1.875	2.625	.844	1.781
-04	TF4R03FB	2	2.062	2.312	2.500	1.438	1.438	N/A	.469	.844	1.219	N/A	1.688	N/A	N/A
-05	TF4R03HB	1	2.625	3.062	3.188	1.859	1.984	.062	.586	.961	1.336	1.711	2.297	.961	1.336
-06	TF4R03KB	1	3.375	3.938	4.312	2.438	2.563	.156	.938	1.312	1.688	2.062	3.000	1.031	1.969
-07	TF4R03FB	2	2.062	2.312	2.500	1.438	1.438	N/A	.469	.844	1.219	N/A	1.688	N/A	N/A
-08	TF4R03GB	1	2.375	2.750	2.812	1.750	1.750	N/A	.500	.874	1.250	1.624	2.125	.874	1.250
-09	TF4R03JB	1	3.062	3.562	3.875	2.125	2.438	.156	.750	1.124	1.500	1.874	2.625	1.124	1.500
-10	TF4R03KB	1	3.375	3.938	4.312	2.438	2.594	.156	.938	1.312	1.688	2.062	3.000	1.188	1.812

FIGURE 1. Dimensions and configurations - Continued.

Dash number	S	N	P	Q (see note 6)
-01	.138-32 UNC-2A	.438	.375	18 AWG
-02	.138-32 UNC-2A	.438	.375	18 AWG
-03	.164-32 UNC-2A	(see note 7)	.375	(see note 7)
-04	.138-32 UNC-2A	.438	.375	18 AWG
-05	.164-32 UNC-2A	.438	.375	18 AWG
-06	.190-32 UNF-2A	.438 (see note 7)	.500	16 AWG
-07	.138-32 UNC-2A	.438	.375	18 AWG
-08	.138-32 UNC-2A	.438	.375	18 AWG
-09	.164-32 UNC-2A	.438	.375	18 AWG
-10	.190-32 UNF-2A	.438 (see note 8)	.500	18 AWG

Inches	mm	Inches	mm	Inches	mm
.062	1.57	.961	24.41	1.938	49.23
.063	1.60	1.000	25.40	1.969	50.01
.138	3.51	1.031	26.19	1.984	50.39
.156	3.96	1.124	28.55	2.062	52.37
.164	4.17	1.125	28.58	2.094	53.19
.190	4.83	1.188	30.18	2.125	53.98
.219	5.56	1.219	30.96	2.297	58.34
.250	6.35	1.250	31.75	2.312	58.72
.312	7.92	1.312	33.32	2.375	60.32
.375	9.52	1.336	33.93	2.438	61.93
.376	9.55	1.375	34.92	2.500	63.50
.438	11.13	1.438	36.53	2.562	65.07
.469	11.91	1.500	38.10	2.563	65.10
.500	12.70	1.624	41.25	2.594	65.89
.586	14.88	1.688	42.88	2.625	66.68
.625	15.88	1.711	43.46	2.750	69.85
.688	17.48	1.750	44.45	2.812	71.42
.719	18.26	1.781	45.24	3.000	76.20
.750	19.05	1.812	46.02	3.062	77.77
.844	21.44	1.859	47.22	3.188	80.98
.874	22.20	1.874	47.60	3.375	85.72
.938	23.83	1.875	47.62	3.875	98.42
				3.938	100.03
				4.312	109.52

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Tolerance on terminal position dimensions is ±.125 (3.18 mm).
4. Unless otherwise specified, tolerance on case dimensions is ±.000, -.125 (+.00, -.3.18 mm).
5. Electrical values shall be marked as specified in table II.
6. Solder lug wire size.
7. Terminals 5 and 6 are 1.250 +.00, -.625 inches in height and .625 ±.062 inch in diameter; terminals 1, 2, 3, and 4 are .438 +.000, -.219 inch in height and .250 ±.062 inch in diameter.
8. Terminals 5 and 6 are .719 +.00, -.125 inch.

FIGURE 1. Dimensions and configurations - Continued.

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

Electrical ratings:

Primary voltage, 60 Hz ±10 percent.

(1-2): 105 volts.

(1-3): 115 volts.

(1-4): 125 volts.

Secondary voltage: See table I.

Secondary current: See table I.

Primary working voltage: See table I.

Secondary working voltage: See table I.

Design and construction:

Dimensions and configurations: See figure 1.

Duty cycle: Continuous.

Case: Metal encased.

Material: Steel.

Terminals: Solder lug, see figure 1.

Height: See figure 1.

Weight: See table I.

Operating temperature range: -55°C to +105°C.

Dielectric withstanding voltage (at sea level): See table I.

Electrical characteristics:

No load: With 115 volts, 60 Hz across (1-3):

Current in (1-3): See table I.

Power in (1-3): See table I.

Voltage across (5-6): See table I.

Voltage across (1-2): 105 volts ±1 percent.

Voltage across (1-4): 125 volts ±1 percent.

Rated load: With 115 volts, 60 Hz across (1-3), and the current specified in table I in (5-6), the voltage across (5-6) shall be as specified in table I.

TABLE I. Electrical characteristics.

Dash number	Secondary voltage	Secondary current	Primary working voltage (max)	Secondary working voltage (max)	Primary DWV	Secondary DWV	No load			Rated load		Weight
							Primary power (max)	Primary current (max)	Secondary voltage (max)	Secondary current	Secondary voltage 2 percent	
	Volts	Amperes	Volts	Volts	Volts	Volts	Watts	Amperes	Volts	Amperes	Volts	Pounds
01	2.5	3	175	1000	1500	2500	0.85	.06	2.90	3	2.5	1.312
02	2.5	10	"	1000	"	2500	1.60	.12	2.85	10	2.5	2.375
03	2.5	10	"	6300	"	10000	3.60	.11	2.95	10	2.5	4.750
04	5.0	3	"	1000	"	2500	1.40	.11	5.86	3	5.0	1.750
05	5.0	10	"	1000	"	2500	2.90	.19	5.50	10	5.0	4.000
06	5.0	10	"	6300	"	10000	5.70	.25	5.60	10	5.0	7.500
07	6.3	2	"	1000	"	2500	1.40	.11	7.37	2	6.3	1.750
08	6.3	5	"	1000	"	2500	2.00	.15	6.98	5	6.3	2.750
09	6.3	10	"	1000	"	2500	5.50	.35	6.87	10	6.3	5.000
10	6.3	20	"	1000	"	2500	5.50	.50	6.72	20	6.3	8.000

Electrostatic shielding: The voltage ratio shall be a minimum of 5 to 1 at 20 kHz.

Polarity: Additive, with terminals 4 and 5 connected.

Temperature rise: +40°C maximum with 105 volts, 54 Hz across (1-2) at an ambient temperature of +65°C.

Marking location: See figure 1.

Part or identifying number (PIN): M27/300-(dash number from table I).

Supersession data: See table II.

TABLE II. Supersession data.

MIL-T-27/300 PIN	Superseded PIN	Former MS PIN
M27/300-01	M27/104-01	MS90016-2
M27/300-02	M27/105-01	MS90017-2
M27/300-03	M27/34-01	MS90024-2
M27/300-04	M27/106-01	MS90018-2
M27/300-05	M27/12-01	MS90019-2
M27/300-06	M27/110-01	MS90025-2
M27/300-07	M27/35-01	MS90020-2
M27/300-08	M27/107-01	MS90021-2
M27/300-09	M27/108-01	MS90022-2
M27/300-10	M27/109-01	MS90023-2

CONCLUDING MATERIAL

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

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

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

Preparing activity:
Army - ER

Agent:
DLA - ES

(Project 5950-0750)