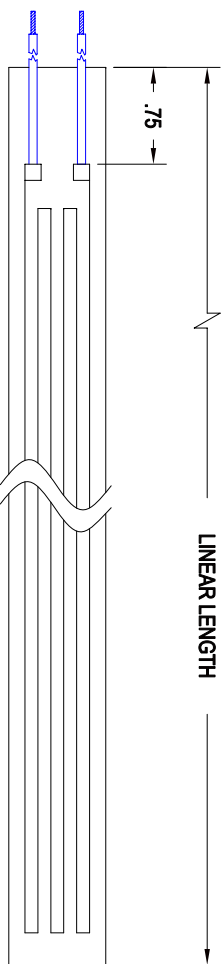
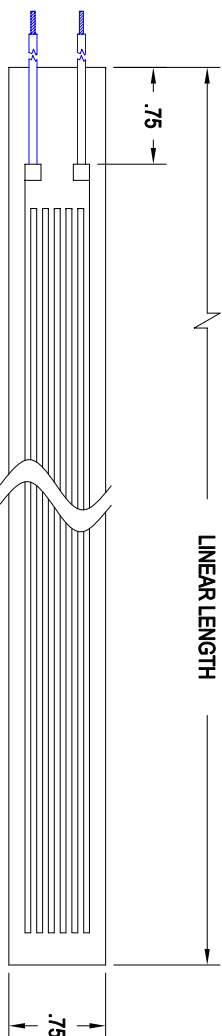


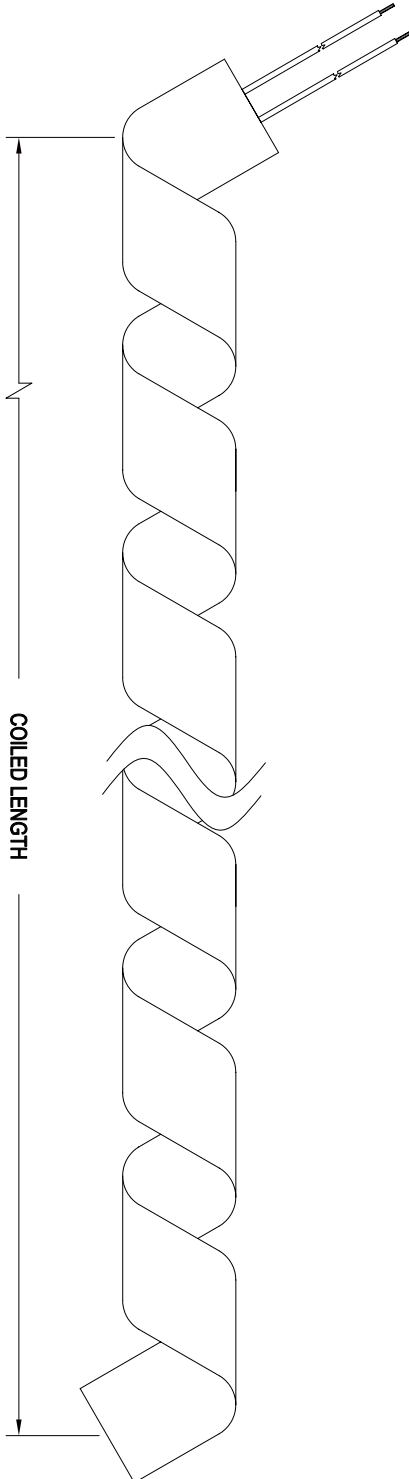
ELECTRICAL DATA																											
	-1	-2	-3	-4	-5	-6	-7	-8	-9	-11	-12	-13	-14	-15	-16	-17	-18	-19	-20	-21	-22	-23	-24	-25	-26	-27	-28
LENGTH	51/8 FT.	7/80 FT.	111/8 FT.	151/8 FT.	253/8 FT.	3125/8 FT.	1335/8 FT.	151/8 FT.	111/8 FT.	113/8 FT.	1013/8 FT.	113/8 FT.	201/8 FT.	3107/8 FT.	4161/8 FT.	1807/8 FT.	381/8 FT.	121/8 FT.	253/8 FT.	213/8 FT.	113/8 FT.	441/8 FT.	523/8 FT.	121/8 FT.	183/8 FT.	441/8 FT.	484/8 FT.
WIDTH	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
AREA	9.0 IN²	11.8 IN²	18.0 IN²	24.0 IN²	35.3 IN²	47.3 IN²	20.1 IN²	24.0 IN²	18.0 IN²	9.0 IN²	11.8 IN²	18.0 IN²	24.0 IN²	35.3 IN²	47.3 IN²	20.7 IN²	44.43 IN²	20.40 IN²	36.07 IN²	43.77 IN²	102 IN²	88.8 IN²	80 IN²	73.5 IN²	30 IN²	73.67 IN²	37.8 IN²
POWER	3.0 W	3.5 W	6.0 W	7.5 W	10.5 W	15.0 W	6.21 W	10.5 W	15.0 W	3.0 W	3.5 W	6.0 W	7.5 W	10.5 W	15.0 W	6.21 W	13.3 W	6.1 W	11.7 W	13.1 W	28 V	28 V	42 W	42 W	9 W	18.6 W	21 W
VOLTS	28 V	28 V	28 V	28 V	28 V	28 V	28 V	28 V	28 V	28 V	28 V	28 V	28 V	28 V	28 V	28 V	28 V	28 V	28 V	28 V	28 V	28 V	28 V	28 V	28 V	28 V	28 V
CURRENT	11 A	13 A	21 A	27 A	37 A	54 A	22 A	37 A	54 A	10 A	10 A	10 A	10 A	10 A	10 A	10 A	10 A	22 A	22 A	47 A	18 A	15 A	15 A	15 A	32 A	66 A	0.75 A
TOTAL RESONANCE TOLERANCE	287.1 Ω	224 Ω	131 Ω	106 Ω	75 Ω	52 Ω	128.2 Ω	74.67 Ω	52 Ω	440 Ω	379 Ω	224 Ω	188 Ω	128 Ω	88 Ω	219 Ω	56.87 Ω	128 Ω	68.89 Ω	59.71 Ω	15.6 Ω	15.6 Ω	18.1 Ω	16.7 Ω	87 Ω	42.15 Ω	37.53 Ω
±.10%	234.9 Ω	206.4 Ω	144.1 Ω	115.5 Ω	82.5 Ω	57.2 Ω	138.8 Ω	82.4 Ω	57.2 Ω	484 Ω	4157 Ω	242 Ω	198 Ω	138 Ω	97 Ω	243 Ω	64.89 Ω	140.8 Ω	73.57 Ω	65.89 Ω	53.74 Ω	14.12 Ω	16.9 Ω	17.3 Ω	37.94 Ω	35.47 Ω	35.47 Ω
LIMIT RESISTANCE	4530 Ω	2847 Ω	1150 Ω	867 Ω	322 Ω	186 Ω	931 Ω	474 Ω	443 Ω	367 Ω	3401 Ω	373 Ω	182 Ω	105 Ω	79 Ω	212 Ω	117.87 Ω	151 Ω	281 Ω	281 Ω	302 Ω	281 Ω	380 Ω	1502 Ω	1502 Ω	1502 Ω	751 Ω
WIRE RESISTANCE TOLERANCE	4176 Ω	271 Ω	120 Ω	61 Ω	236 Ω	153 Ω	857 Ω	430 Ω	407 Ω	350 Ω	350 Ω	350 Ω	350 Ω	350 Ω	350 Ω	350 Ω	350 Ω	350 Ω	350 Ω	350 Ω	350 Ω	350 Ω	350 Ω	350 Ω	350 Ω	350 Ω	350 Ω
±.8%	4176 Ω	271 Ω	120 Ω	61 Ω	236 Ω	153 Ω	857 Ω	430 Ω	407 Ω	350 Ω	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP
WIRE	30 WINP	—	—	—	—	—	30 WINP	44 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP	30 WINP
H. POT	750 V	—	—	—	—	—	—	—	750 V	1000 V	—	—	—	—	—	1000 V	750 V	750 V	750 V	750 V	750 V	750 V	750 V	750 V	750 V	750 V	750 V
MATERIAL DATA																											
HTR SERIES	5300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
ELEMENT	FINISH	EVANOHM	CUPRON	CUPRON	SPIRALLED WIRE	CUPRON	180 ALLOY	SPIRAL	SPIRAL	SPIRAL	EVANOHM	SPIRAL	SPIRAL	EVANOHM	180 ALLOY	EVANOHM	—	—	—	—	SPIRALLED	—	—	—	—	—	—
	WIRE GA.	43.3 GA.	30.0 GA.	11.99 GA.	3.21 GA.	1.75 GA.	4.70 GA.	4.38 GA.	38.0 GA.	37 GA.	35 GA.	35 GA.	35 GA.	40.8 GA.	47.0 GA.	122.60 GA.	1.48 GA.	10.0 GA.	2.82 GA.	2.67 GA.	1.73 GA.	350 GA.	2.82 GA.	1.40 GA.	4.38 GA.	7.51 GA.	
MATERIAL	TYPE	SEE	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	UNLESS OTHERWISE SPECIFIED	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
LEAD WIRE	AWG.	20 GA.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TERMINAL	LENGTH	6.0 FT.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
BUSS	—	ES-537	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TEST	WELDED	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	OPEN	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TEST	RECD	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	CLOSE	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—



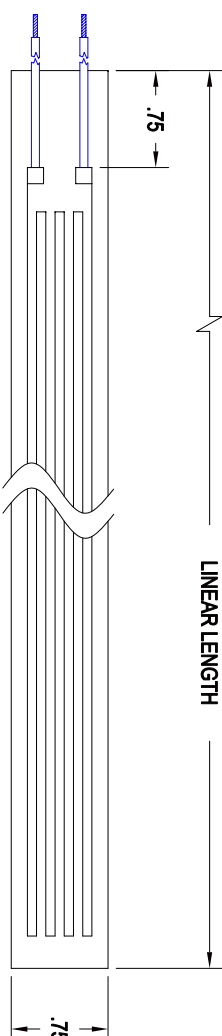
(-1 THRU -9, -13, -21, -23, -24 & -26 CONFIGURATION)



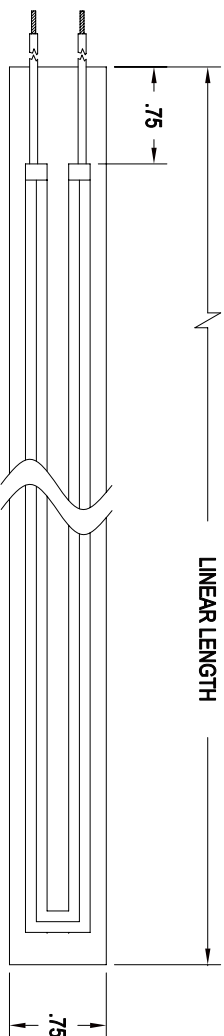
(-11 & -28 CONFIGURATION)



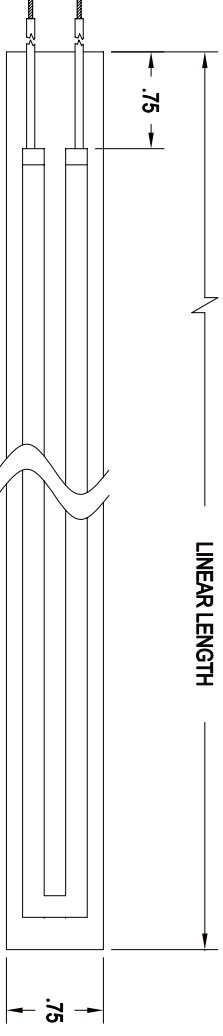
CURED CONFIGURATION



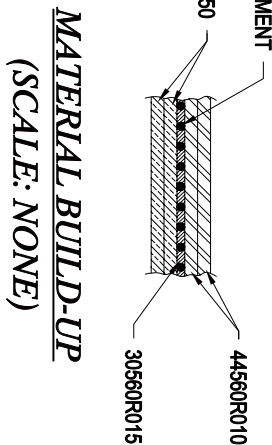
(-12 & -14 THRU -20 CONFIGURATION)



(-27 CONFIGURATION)



(-22 & -24 CONFIGURATION)



(SCALE: NONE)

DASH NUMBER	LINEAR LENGTH	38 DIA. (REF.)	50 DIA. (REF.)	62 DIA. (REF.)	80 DIA. (REF.)	82 DIA. (REF.)
-1/-11	12.00	10.00	—	—	—	—
-2/-12	15.70	—	10.00	—	—	—
-3/-9/-13	24.00	20.00	—	—	—	—
-4/-14	32.00	30.00	20.00	—	—	—
-5/-15	47.10	30.00	—	—	—	—
-6/-16	63.00	40.00	—	—	—	—
-7/-17	27.90	23.00	—	—	—	—
-8	32.00	—	15.30	—	—	—
-18	59.24	—	—	19.88	—	—
-19	20.40	17.00	—	—	—	—
-20	39.07	—	24.57	—	—	—
-21	43.77	—	—	20.08	—	—
-22	107.00	—	—	49.25	—	—
-23	89.50	—	50.25	—	—	—
-24	32.50	—	—	41.81	—	—
-25	75.70	—	42.50	—	—	—
-26	38.50	—	24.00	—	—	—
-27	89.24	82.7	—	—	—	—
-28	50.4	42.00	—	—	—	—

- GENERAL INSPECTION PROCEDURE CA-90-009
- PACKAGE PER FA-027.
- IDENTIFY PER ESS93-5-TYPE 1.12 NEAR LEADS, SERIAL NUMBER.

- VACUUM BAG CURE 38 DIA. & 50 DIA. HTRS ON A 38 DIA. MANDREL.
- VACUUM BAG CURE 62 DIA. & 68 DIA. HTRS ON A 62 DIA. MANDREL.

NOTES: UNLESS OTHERWISE SPECIFIED

REVISIONS				
SWI	ZONE	DESCRIPTION	DATE	APPROVAL
A		6 DASH NOS. WAS 8, REVISED DATA TABLE & NOTE 1.	12/3/82	J. Handley
B		ADDED MNTL. BUILD-UP.	2/28/83	J. Handley
C		ADDED -11 THRU -16 (115 V) CONFIGURATIONS.	7/13/84	J. Handley
D		ADDED -7 CONFIGURATION.	12/30/85	J. Handley
E		REVISED NOTE 1 AND DATA TABLE.	3/8/86	J. Handley
F		ADDED -9 CONFIGURATION.	11/6/90	J. Handley
G		ADDED -18 CONFIGURATION.	5/21/98	D. S.
H		ADDED -18, -20 & -21 CONFIGURATION.	8/23/98	J. Handley
J		ADDED -22 & -23 CONFIGURATION.	12/17/99	D. S.
K		ADDED -24 & -25 CONFIGURATION.	1/4/00	J. H.
L		REPRGRAM ON COMPUTER, ADDED NEW DETAIL.	1/21/00	D. S.
M		REVISED -22, -23, -24 & -25.	6/6/2001	D. S.
N		REVISED NOTE 2 TO INCLUDE SERIAL NUMBER.	6/6/11/01	D. S.
P		REVISED QJ/T 2, -7, -8, -9, -12, -13, -14, -17, -25	09/27/01	D. S.
R		ADDED -26	09/17/02	D. S.
S		ADDED -27	09/15/04	D. S.
T		ADDED -28 PER ECH-11865-002	03/17/05	D. S.

QTY.	RECD.	NOMENCLATURE OR DESCRIPTION	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	CODE IDENT.	ZONE	ITEM NO.
LIST OF MATERIALS								
UNLESS OTHERWISE SPECIFIED				ELECTROFILM APPROVALS				
ALL DIMENSIONS ARE IN INCHES				DRAWN	D. MOES	11/22/82	HEATER, TUBE	
DO NOT SCALE DRAWING				CHECK	J. Handley	12/1/82		
BRIEF ALL SHARP EDGES				ENG'G	J. Handley	12/1/82		
TOLERANCES:				PROD.			HEATER, TUBE	
XX ± .03								
X ± .05								
ANGLES =							HEATER, TUBE	
FINISH								
CODE IDENT. NO.								
856932								
D								
SCALE FULL								
WT.								
115855								

Electrofilm Mfg. Co.
115855