

FBT-00-128 SPECIFICATIONS

FBT-00-128 IS A PRECISION VOLTAGE REGULATOR UTILIZING AN ON-CHIP HEATER WHICH MAINTAINS A CONSTANT JUNCTION TEMPERATURE.

I. MAXIMUM SPECIFICATIONS

1. MAXIMUM INPUT VOLTAGE	45V
2. OPERATING INPUT VOLTAGE RANGE	13.5V ≤ VIN ≤ 16.5V
3. LOAD CURRENT (PIN 5)	10MA
4. SHORT CIRCUIT CURRENT (PIN 5)	5.0MA
5. IDLE CURRENT AT TURN-ON	150MA
6. OPERATING AMBIENT TEMPERATURE RANGE	-20°C TO 95°C
7. STORAGE TEMPERATURE RANGE	-55°C TO 95°C

II. ELECTRICAL CHARACTERISTICS

A. VOLTAGE LOOP

1. REFERENCE VOLTAGE (BETWEEN PINS 10 AND 9) 8.0V TO 8.8V
2. PROGRAMMING CURRENT: PROGRAMMING CURRENT IS TO BE GIVEN BY THE EQUATION I_{PROG} = $\frac{V_{REF}}{R_1} \pm 50 \text{ PPM}$.
3. LINE EFFECT ON I_{PROG} $\frac{\Delta I_{PROG}}{\Delta V_{IN}=1 \text{ VOLT}}$ 0.005% MAX
4. LOAD EFFECT ON I_{PROG} $\frac{\Delta I_{PROG}}{\Delta I_L: 0 \text{ TO } I_{MA}}$ 0.005% MAX.
5. TEMPERATURE COEFFICIENT OF I_{PROG} FOR CHANGE IN EXTERNAL AMBIENT NOISE VOLTAGE ON R₂ (BW=1 KHZ) 0.01 MV RMS MAX.
7. RIPPLE REJECTION- MEASURED ACROSS R₂, R₁= R₂. $20 \text{ LOG } \frac{V_{R2}}{V_{IN-P-P}}$, 100HZ-1000HZ 70DB MIN.
8. OFFSET VOLTAGE (BETWEEN PINS 2 AND 6) 40MV ± 10MV
9. LINE EFFECT ON OFFSET VOLTAGE $\frac{\Delta V_{IN}=1 \text{ VOLT}}$ 0.02 MV MAX
10. LOAD EFFECT ON OFFSET VOLTAGE $\frac{\Delta V_{IN}=1 \text{ VOLT}}$ 0.2 MV MAX
11. TEMPERATURE COEFFICIENT OF OFFSET VOLTAGE FOR CHANGE IN EXTERNAL AMBIENT 0.01 MV/°C MAX.
12. VOLTAGE GAIN-TOTAL LOOP (BETWEEN PINS 2 AND 5) 90DB MIN

B. CURRENT LOOP

1. REFERENCE CURRENT (PIN 7) 1 MA ± 25%
2. LINE EFFECT ON I_{REF} $\frac{\Delta I_{REF}}{\Delta V_{IN}=1 \text{ VOLT}}$ 0.005% MAX
3. LOAD EFFECT ON I_{REF} $\frac{\Delta I_{REF}}{\Delta V_O: 0 \text{ TO } V_O \text{ MAX}}$ 0.005% MAX
4. TEMPERATURE COEFFICIENT OF I_{REF} FOR CHANGE IN EXTERNAL AMBIENT 0.005%/°C MAX
5. OFFSET VOLTAGE (PIN 7 TO PIN 8) 0MV TO 20MV
6. LINE EFFECT ON OFFSET VOLTAGE $\frac{\Delta V_{IN}=1 \text{ VOLT}}$ 0.02 MV MAX
7. LOAD EFFECT ON OFFSET VOLTAGE $\frac{\Delta V_O: 0 \text{ TO } V_O \text{ MAX}}$ 15uV MAX.
8. TEMPERATURE COEFFICIENT OF OFFSET VOLTAGE FOR CHANGE IN AMBIENT TEMPERATURE 0.01 MV/°C MAX.
9. VOLTAGE GAIN (PIN 7 TO PIN 5) 90 DB MIN.

III. MECHANICAL SPECIFICATION

1. PACKAGE 10 PIN HERMETIC PACKAGE - DIMENSIONS AS PER FIG. 1
2. LEADS LEADS TO BE TIN PLATED KOVAR (STANDARD VENDOR PLATING).
3. MARKING STAMP TOP OF CAST WITH FBT-00-128
4. PARTS TO BE SUPPLIED IN BARNES TYPE 132-011 CARRIER OR EQUIVALENT
5. MANUFACTURERS PART # POWER MONOLITHICS LAS 3700

NOTES:

1. ALL ELECTRICAL SPECIFICATIONS APPLY FOR THE TEST CIRCUIT SHOWN IN FIG 2
2. To protect against damage due to electrostatic discharge, these units must be manufactured, handled and shipped in accordance with DOD-STD-1686.

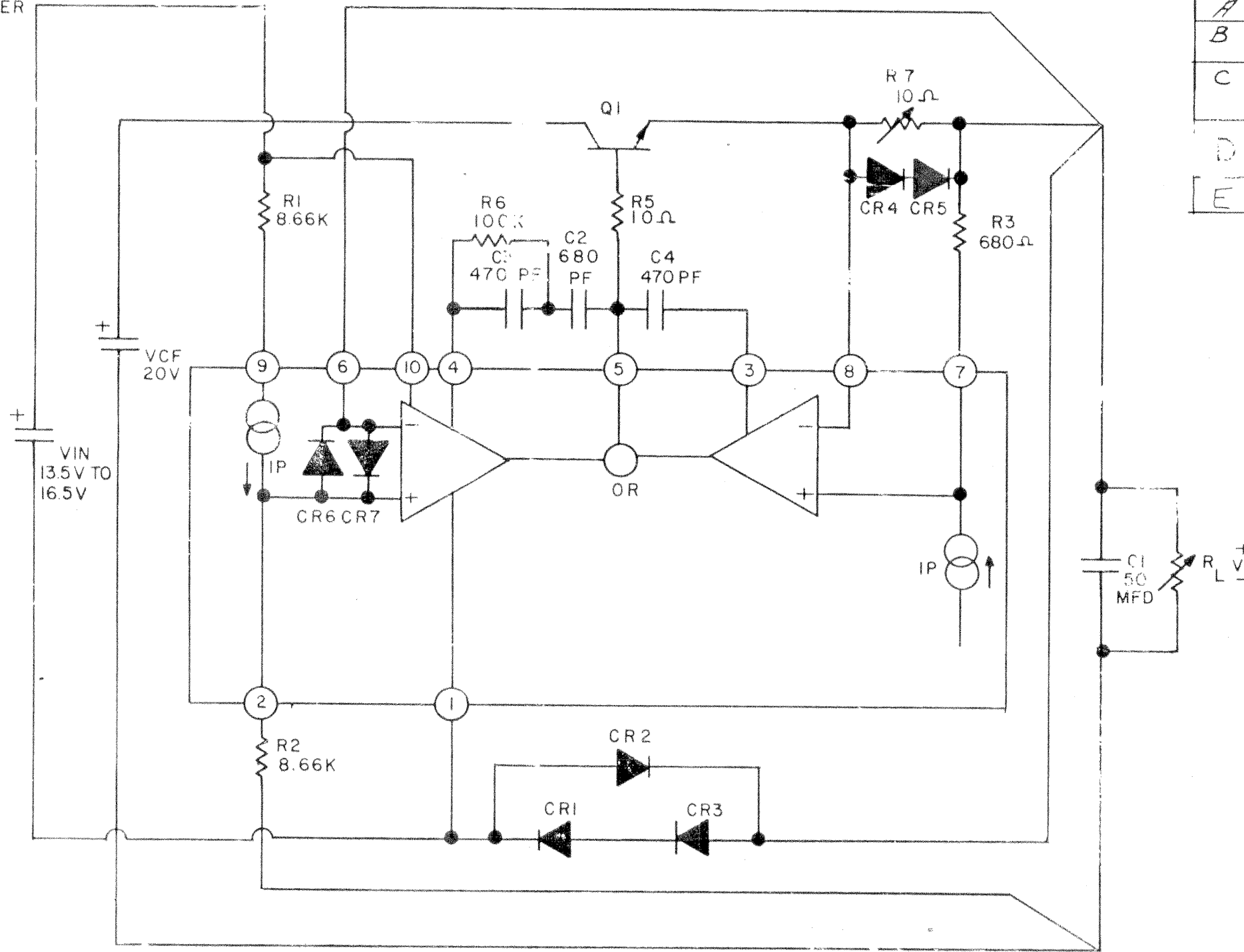
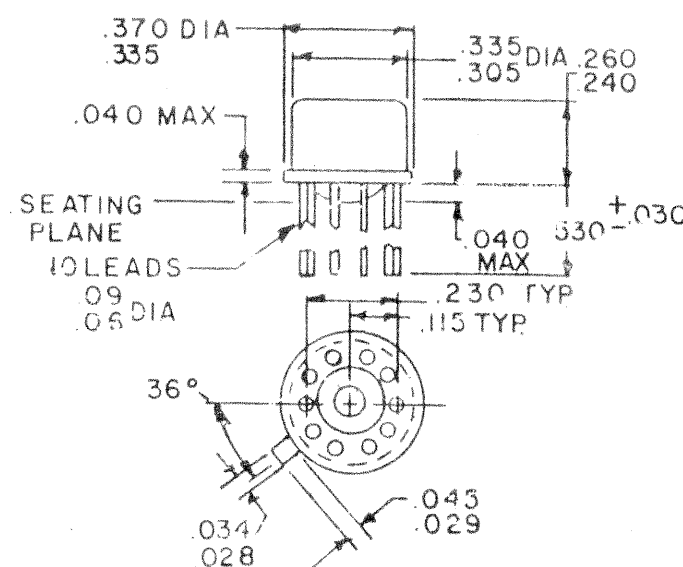
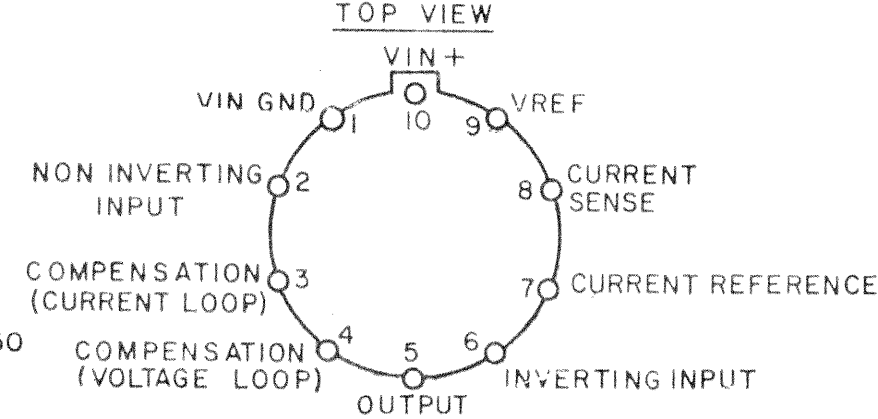


FIG 2: LAS3700 TEST CIRCUIT

FIG 1



CONNECTION DIAGRAM

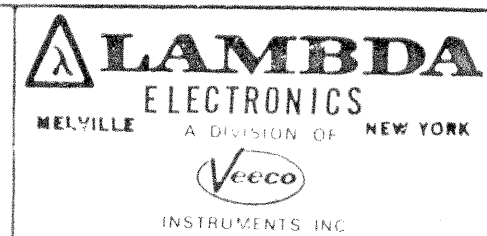


REQ'D	PART NO.	ITEM	DESCRIPTION	MAT'L OR MFR.	MAT'L SPEC OR CAT NO OR REMARKS
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LIST OF MATERIAL

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND TOLERANCES AS FOLLOWS:
 DEC. ± .005 FRACTIONS ± 1/64 ANGLES ± 1/2°

SIGNATURE	DATE	TITLE
DR. KEN HOFFMAN	12-5-81	INTEGRATED CIRCUIT (PRECISION VOLTAGE REGULATOR)
CHK. <i>[Signature]</i>	12/10/81	
ENGR. GGG	12/15/81	
APPD.		
ASSY.		
SCALE		



LAMBDA PART NO & DWG. NO. FBT-00-128 REV. E

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVAL
A	ORIGINAL		
B	REDRAWN & REVISED PER ECO #483	12/15/81	CM
C	REVISED EXTENSIVELY PER ECO NO. A01027	1/9/82	GGG
D	IN ITEM II.A REFERENCE VOLTAGE WAS "7.65V TO 8.36" ECO #01755	4/8/86	GGG
E	ADDED NOTE 2 PER ECO A01981	3-5-87	JH

BRUNING 40-21-50904