| REF DES | SUPPLY | PIN NUMBER |
|---|---|---|
| U4P | -12.4V | 14 |
| | -17.4V | 7 |
| U5P | -12.4V | 14 |
| | -17.4V | 7 |
| U7P | -12.4V | 44 |
| | -17.4V | 22 |
| U1P | -12.4V | 44 |
| | +17.4V | 1 |
| | -17.4V | 22 |
| U6P | -12.4V | 20 |
| | -17.4V | 10 |

Ⓐ BYPASS CAPACITORS

-12.4V C13 0.1u -17.4V
-12.4V C8 0.1u -17.4V
-12.4V C12 0.1u -17.4V
-12.4V C10 0.1u -17.4V

Ⓑ ETC

C1 0.1u -17.4V
M1 SHIELD_VFD 1 2 3 4 5

Ⓒ -13V SUPPLY

R4 14.7
R3 14.7
R2 14.7
R1 14.7
U2 MC78L05ACD VR INP OUT COM 8 1 2,3,6,7
C4 1u
C5 1u
-12.4V

Ⓓ +6V SUPPLY

+17.4V R12 2.61K +6V
CR2 6.2V
C11 0.1u
-17.4V

CR1 MBAV99 -12.4V -17.4V RESET
D6 0.01u IGFPRES
R6 26.1K
U3 UNDV SEN CKT INP RESET MC34064D-5
C20 0.1u
R10 1K
Q2 MMBT2222A
R5 10K
U4B 74HC02
R7 10K
R15 10K
R11 10K
Q1 MMBT2222A
U4A 74HC02
R9 10K
C7 0.1u
R8 10K
C9 0.01u
Y1 12MHz
U7 N80C51BH
RST XTAL1 XTAL2 PSEN ALE/#PROG #EA/VPP T2 T2EX ECI CEX0 CEX1 CEX2 CEX3 CEX4
AD0 AD1 AD2 AD3 AD4 AD5 AD6 AD7 P0.0–P0.7
P1.0–P1.7
P2.0–P2.7
P3.0 A10 … P3.7 A10
KEY_DRV[0] KEY_DRV[1] KEY_DRV[2] KEY_DRV[3]
KEY_SENSE[0] KEY_SENSE[1] KEY_SENSE[2] KEY_SENSE[3]
KNB SENSE_A KNB SENSE_B
SIO_0 … SIO_7
NC
SR_CTRL FPSCK FPINT

S1 (HI) S2 (LOW) S3 (OVP) S4 (Recall)
S5 (Display Limit) S7 (Store) S8 (Error)
S9 (I/O Config) S10 (Output On/Off) S11 (Left) S12 (Right)
S13 (Voltage/Current) S14 (Output1) S15 (Output2) S16 (Track)

RE1 ROTARY_ENCODER
C15 0.1u

U6 SRQB EN13 74HC299D
U5B 74HC174D
U8D LM339M
R20 100K
R21 100K
C25 0.1u
R22 20.1K
FPDO

U1 SRG32 EN3 C2 C1/→ 74HC164D
U5A 74HC174D
U4D 74HC02
C2 0.1u
DISP_LATCH
DISP_BLANK
DISP_SCLK
SN75518FN
ANODE_0 … ANODE_17
GRID_0 … GRID_11
DP1 DP2 COM

U9 DSPY_VFD
FILAMENT F1 F2 1,2 48,49
ANNUN
G1 G2 G3 G4 G5 G6 G7 G8 G9 G10 G11 G12

DISP_SDATA
DISP_SCLK
DISP_LATCH
DISP_BLANK
J1-1 … J1-12
+17.4V
2.5V
C3 0.1u
C14 0.1u
FIL2
FIL1

U8B LM339M
U8A LM339M
U8C LM339M
R16 215
C16 1000p
R17 215
C17 1000p
R19 215
R18 215
C18 0.01u
C19 0.1u
E1
IGFPSCK
IGFPDI
IGFPRES
IGFPINT
R13 10K
R14 10K
U4C 74HC02