CAN Transceiver
This guy checks where a CAN message is
supposed to be going and decides whether
or not to forward it onto our CAN controller
(if the address is correct)

VCC

U1
TJA1051T-E

3 VCC
5 VREF
TXCAN 1 TXD
RXCAN 4 RXD
2 GND

S 8
CANH 7
CANL 6

GND

R2
R_120

CANH
CANL

J1
CONN_01x02
1
2

J2
CONN_01x02
1
2

J3
CONN_01x02
1
2

GND

SI   SI1   1 Test_Point_SMD
SO   SO1   1 Test_Point_SMD
CS   CS1   1 Test_Point_SMD
SCK   SCK1 1 Test_Point_SMD
OSC+ OSC+1 1 Test_Point_SMD
OSC- OSC-1 1 Test_Point_SMD
INT   INT1 1 Test_Point_SMD
RXCAN RXCAN1 1 Test_Point_SMD
TXCAN TXCAN1 1 Test_Point_SMD
CANH CANH1 1 Test_Point_SMD
CANL CANL1 1 Test_Point_SMD
VCC   VCC1 1 Test_Point_SMD
GND   GND1 1 Test_Point_SMD

VCC

U2
MCP2515-xSO

SI   14 SI
SO   15 SO
CS   16 CS
SCK 13 SCK

VDD 18

RXCAN 2 RXCAN
TXCAN 1 TXCAN

INT   12 INT
RX0BF 11
RX1BF 10
TX0RTS 4
TX1RTS 5
TX2RTS 6
RESET 17

VCC

R_10K
R1

RESET is active low.
Can be driven by chip by SPI command
See PG57 of datasheet.

C1
C_22pF

Y1
Crystal_8MHz

OSC-

7 OSC2
8 OSC1
3 CLKOUT/SOF

GND

C2
C_22pF

OSC+

VSS 9

GND

Capacitors are differential pair
OSC1/2 must be identical & equal
distance away so oscillator
osscilates well

VCC

GND

J4
Conn_01x07

1
2
CS   3
SO   4
SI   5
SCK 6
INT 7

1
2
3
4
5
6
7

VCC

C3
C_10uF_16v

C4
C_0.1uF

C5
C_0.1uF

R3
R_1K

D1
LED_0805_Red

GND