DESIGN CONSIDERATIONS

CONFIGURATION
- C1 and C2 (C11,C12) are selected to filter the incoming waveform and are application dependent
- C3 and R2 are selected based on input frequency, determined by the number of teeth on trigger wheel

C3 AND C13
- The input waveform must not drop faster than the decay of voltage on this
  capacitor, i.e. by high speed input, otherwise there may be a loss of output signal.

R1 (R11)
- are selected to limit the peak input current to +-3mA
- a value of 18k allows +-54V

MODE pin5
- N.C. = adaptive
- connected to +V = 200mV Peak threshold
- connected to Gnd = 25mV Peak threshold

Output Pulse Width :
= 0.673x R3   x C4 (R13,C14)
And Fin Max = 1/(1.346x R x C) : with 150k and 1n Fin Max=5kHz

DUAL LM1815 VR CONDITIONER FOR:

- TOYOTA 4AGE
- TOYOTA 3SGTE
- TOYOTA 1UZ (NON-VVTI WITH COMMON GND)
- MAZDA 13B S4 & S6
- MAZDA 20B
- MAY WORK ON HONDA DIZZY SENSORS BUT NOT TESTED

KiwiEFI TOYOTA VR CONDITIONER

Sheet: /
File: KiwiEFIvr1815_0.1.kicad_sch

Title:

Size: A4   Date: Rev:
KiCad E.D.A. kicad 7.0.10   Id: 1/1

CRANK

VR1+ R11 18K
VR1-
C11 10N   C12 10N   GND   GND   GND   C13 470N 50V   R12 1M5   GND   GND

U1 LM1815_NOnc
1 nc   RC 14
2 GND   nc 13   GND
3 GND / Vin Pout 12 GND
4 GND / nc IS 11   GND
5 nc / MODE GO 10   GND
6 GND / nc TPI 9   GND
7 PDC   Vcc 8

VCC R13 150K C14 1N 50V GND
VCC R14 1K   C15 10N 50V GND
VCC C16 100N 50V C17 1UF 50V GND GND

CAM

VR2+ R1 18K
VR2-
C1 47N   C2 47N   GND   GND   GND   C3 470N 50V   R2 1M5   GND   GND

U3 LM1815_NOnc
1 nc   RC 14
2 GND   nc 13   GND
3 GND / Vin Pout 12 GND
4 GND / nc IS 11   GND
5 nc / MODE GO 10   GND
6 GND / nc TPI 9   GND
7 PDC   Vcc 8

VCC R3 150K C4 1N 50V GND
VCC R4 1K   C5 10N 50V GND
VCC C6 100N 50V C7 1UF 50V GND GND

U2 SN74HC14N
VCC
1 1A   1Y 2
3 2A   2Y 4
5 3A   3Y 6
9 4A   4Y 8
11 5A 5Y 10
13 6A 6Y 12
7 GND
14 VCC

C8 100N 50V GND
C9 10uF10V GND

R5 1k LED D1 OP1
R6 1K LED D2 OP2

PWR_FLAG VCC
PWR_FLAG 5V
PWR_FLAG 0V GND

J1 Conn_02x04_Counter_Clockwise

VR1-	1	8	OP1
VR1+	2	7	OP2
VR2+	3	6	0V
VR2-	4	5	5V