

# JTK-VSSA Bill Of Materials

## Resistors

All resistors will be 1/4W 5% tolerance or better metal film (MF) or carbon film (CF) unless otherwise specified that will fit 10mm (0.400") lead spacing (LS).

R1 - 100K  
R2 - 10K  
R3, R13, R14, R16, R19 - 10R  
R4 - 1K6  
R5, R6 - 390R  
R8, R9 - 2K2, 1% or better MF  
R7, R10 - 100R, 1% or better MF  
R11, R12 - 22K for 2Q CCS, or 3K9 for 1Q+LED CCS  
R15 - 2K2  
R17, R18 - 100R  
R20, R21 - 20R, 1/2W or better that will fit 12.5mm (0.500") LS  
VR1, VR3 - 500R, Bourns 3296W series or similar precision trimmer  
VR2 - 5K, Bourns 3296W series or similar precision trimmer

## Capacitors

C1 - 10uF,  $\geq 50V$ , 22.5mm (0.900") LS, Film or Non-Polarized Electrolytic  
C2 - 470pF,  $\geq 50V$ , 5mm (0.200") LS, C0G / NP0 Ceramic or Film  
C3 - 10uF,  $\geq 16V$ , 5mm (0.200") LS,  $\leq 7.5mm$  (0.300")  $\varnothing$   
C4, C5 - 2200uF,  $\geq 6.3V$ , 5mm (0.200") LS, 12.5mm (0.500")  $\varnothing$ , Aluminum Electrolytic  
C6, C8, C11, C13 - 1uF,  $\geq 50V$ , 5mm (0.200") LS, Film or XR7 Ceramic  
C7, C9, C10, C12 - 1000uF,  $\geq 50V$ , 5mm (0.200") LS @ 12.5mm (0.500")  $\varnothing$  or 7.5mm (0.300") LS @ 16mm (0.650")  $\varnothing$ , Aluminum Electrolytic  
C14, C15 - 47nF,  $\geq 50V$ , 5mm (0.200") LS, Film or XR7 Ceramic  
COMP1, COMP2 - 22pF,  $\geq 100V$ , 5mm (0.200") LS, Silver Mica or C0G / NP0 Ceramic

## Diodes

D1, D2, D3, D4 - 1N4007 or similar,  $\geq 1A$ ,  $\geq 100V$ , rectifier or diode  
Red LEDs may replace Q3 and Q6 for alternative CCS

## Transistors

Q1, Q5 - KSC1845F or similar ECB pinout TO-92 device  
Q2, Q4 - KSA992F or similar ECB pinout TO-92 device  
Q3 - BC560C or similar CBE pinout TO-92 device  
Q6, Q8 - BC550C or similar CBE pinout TO-92 device  
Q7 - KSA1220A or similar ECB pinout TO-126 device  
Q9 - KSC2690A or similar ECB pinout TO-126 device  
M1 - 2SK1058 or similar GSD pinout TO-247 device  
M2 - 2SJ162 or similar GSD pinout TO-247 device  
Please Note: The output devices, M1 and M2, must be lateral type MOSFET devices!