



Bill of Materials for the CCRACGEVB Evaluation Board

Driver Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
D1-D6	6	400 V, 1 A Standard Recovery Rectifier	MRA4004T3G	-	SMA	ON Semiconductor	MRA4004T3G	No	Yes
D7	1	120 V, 3 W Zener Voltage Regulator	1SMB5951B	-	SMB	ON Semiconductor	1SMB5951BT3G	No	Yes
D8-D10	3	24 V, 200 mW Zener Voltage Regulator	NZ9F24V	-	SOD-923	ON Semiconductor	NZ9F24VT5G	No	Yes
CCR1, CCR2	2	50 V, 10 mA Constant Current Regulator	NSI50010YT1G	30%	SOD-123	ON Semiconductor	NSI50010YT1G	No	Yes
CCR3	1	120 V, 20 mA Constant Current Regulator	NSIC2020B	15%	SMB	ON Semiconductor	NSIC2020BT3G	No	Yes
CCR4	1	120 V, 30 mA Constant Current Regulator	NSIC2030B	15%	SMB	ON Semiconductor	NSIC2030BT3G	No	Yes
CCR5	1	120 V, 50 mA Constant Current Regulator	NSIC2050B	15%	SMB	ON Semiconductor	NSIC2050BT3G	No	Yes
CCR6	1	50 V, 150-350 mA Constant Current Regulator	NSI50150AD	10%	DPAK	ON Semiconductor	NSI50150ADT4G	No	Yes
M1-M3	3	500 V N-Channel Power MOSFET	NDD05N50Z	-	DPAK	ON Semiconductor	NDD05N50ZT4G	No	Yes
T1	1	400 V, 8 A NPN Darlington Power Transistor	MJB5742	-	D2PAK	ON Semiconductor	MJB5742T4G	No	Yes
Q1, Q2	2	3-terminal Shunt Regulator Diode	TL431CDMR2G	-	Micro8	ON Semiconductor	TL431CDMR2G	No	Yes
C1	1	1 μ F, 450 V Surface Mount Capacitor	1 μ	20%	1812	Any	Any	Yes	Yes
C2-C5	4	2.2 μ F, 450 V Surface Mount Capacitor	2.2 μ	10%	2220	Any	Any	Yes	Yes
C6	1	33 μ F, 10 V Surface Mount Capacitor	33 μ	20%	1206	Any	Any	Yes	Yes
C7, C8	2	22 μ F, 100 V Surface Mount Capacitor	22 μ	-	2220	Any	Any	Yes	Yes
R1	1	470 k Ω , 500 mW Surface Mount Resistor	430k	1%	2020	Any	Any	Yes	Yes
R2	1	6.8 k Ω 1 W Surface Mount Resistor	7k	1%	2512	Any	Any	Yes	Yes
R3, R4	1	10 k Ω , 500 mW Surface Mount Resistor	10k	1%	2020	Any	Any	Yes	Yes
R5, R9	2	240 k Ω , 500 mW Surface Mount Resistor	240k	1%	2020	Any	Any	Yes	Yes
R6, R11	2	100 k Ω , 500 mW Surface Mount Resistor	100k	1%	2020	Any	Any	Yes	Yes
R7(ADJ)	1	200 Ω , 1 W Adjustable Surface Mount Resistor	0-200	-	-	Any	Any	Yes	Yes
R8	1	145 k Ω , 1 W Surface Mount Resistor	145k	1%	2512	Any	Any	Yes	Yes
R10(ADJ)	1	5 k Ω , 1 W Adjustable Surface Mount Resistor	5k	-	-	Any	Any	Yes	Yes
R12	1	11.1 k Ω , 1 W Surface Mount Resistor	11.1k	1%	2512	Any	Any	Yes	Yes
R13	1	2.4 k Ω , 500 mW Surface Mount Resistor	2.4k	1%	2020	Any	Any	Yes	Yes
R14	1	1 Ω , 500 mW Surface Mount Resistor	1	1%	2020	Any	Any	Yes	Yes
R15	1	3.9 Ω , 1 W Surface Mount Resistor	3.9	1%	2512	Any	Any	Yes	Yes
R16	1	1.1 k Ω , 1 W Surface Mount Resistor	1.1k	1%	2512	Any	Any	Yes	Yes
R17	1	25 Ω , 500 mW Surface Mount Resistor	25	1%	2020	Any	Any	Yes	Yes
J1-J22	22	2 Pin Header 0.1" SP	-	-	2.54 mm	Any	Any	Yes	Yes
J1-J22	22	Jumpers 0.1"	-	-	2.54 mm	Any	Any	Yes	Yes
VIN1, VIN2, GND_TP, TO_ANODE, TO_CATHODE, ANODE, CATHODE	7	Terminal PC Test Point Loop	-	-	-	Any	Any	Yes	Yes
TP1-TP12	12	Test Point Loop	-	-	-	Any	Any	Yes	Yes

LED Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
D11-D20	10	20 V High Power LEDs - White	XLamp MX-6S	-	-	Cree, Inc.	MX6SWT-A1	No	Yes
J23-J27	5	2 Pin Header 0.1" SP	-	-	2.54 mm	Any	Any	Yes	Yes
J23-J27	5	Jumpers 0.1"	-	-	2.54 mm	Any	Any	Yes	Yes