



Bill of Materials for the SEC-EPS-12V-APM19-GEVB Reference Design Board (Power Board)

Designator(Main Board)	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C1, C2	2	MLCC, 1210, 10uF/50V				MURATA	GCM32EC71H106KA03K	No	Yes
C3, C21, C22, C23, C24, C25, C26, C28, C29, C30, C37, C39, C41, C42, C80	15	MLCC, 0603, 1nF/50V				MURATA	GCM1885G1H103FA16D	No	Yes
C4	1	Capacitor, 220uF/50V				PANASONIC	EEEFN1H221V	No	Yes
C5, C18, C19, C20, C54	5	MLCC, 0805, 1uF/25V				MURATA	GCM21BR71E105KA56L	No	Yes
C6, C7, C12, C27, C36, C38, C40, C55, C59, C65, C72, C79	12	MLCC, 0603, 100nF/50V				MURATA	GCM1885G1H104FA16D	No	Yes
C8, C58, C63	3	MLCC, 0603, 2.2nF/50V				MURATA	GCM1885G1H222FA16D	No	Yes
C9, C43, C45, C47, C49, C53	6	MLCC, 0603, 10nF/50V				MURATA	GCM1885G1H103FA16D	No	Yes
C10, C11, C46	3	MLCC, 1206, 10uF/50V				MURATA	GCM31CC71E106KA03K	No	Yes
C13, C14, C15, C16, C17, C34, C35	7	MLCC, 1206, 4.7uF/50V				MURATA	GCM31CC71H475KA03K	No	Yes
C31, C32, C33	3	Capacitor, 2.2mF/40V				TDK	B41692C7248Q001	No	Yes
C44, C48, C52	3	MLCC, 1206, 4.7uF/25V				MURATA	GCM31CR71E475KA55L	No	Yes
C50, C51	2	MLCC, 0603, 22pF/50V				MURATA	GCM1885G1H220FA16D	No	Yes
C56, C61	2	MLCC, 0603, 470pF/50V				MURATA	GCM1885G1H471FA16D	No	Yes
C57, C62	2	MLCC, 0603, 56pF/50V				MURATA	GCM1885G1H560FA16D	No	Yes
C60, C64	2	MLCC, 0603, 2.7nF/50V				MURATA	GCM1885G1H272FA16D	No	Yes
C66, C69, C73, C76	4	MLCC, 0603, 120pF/50V				MURATA	GCM1885G1H121FA16D	No	Yes
C67, C70, C74, C77	4	MLCC, 0603, 3.9nF/50V				MURATA	GCM1885G1H392FA16D	No	Yes
C68, C71, C75, C78	4	MLCC, 0603, 680pF/50V				MURATA	GCM1885G1H681FA16D	No	Yes
D2	1	Zener Diode, 16V, SOD-323				ONSEMI	SZMM3Z16VT1G	No	Yes
D1, D3, D4, D5, D8, D10, D11, D12, D13, D14, D15, D16, D17, D18	14	Switch Diode, 70V, SOD-323				ONSEMI	SMMDL6050T1G	No	Yes
D6	1	Schottky Diode, 40V/5A, SMC				ONSEMI	NRVBS540T3G	No	Yes
D7	1	TVS Bipolar Diode, SOD-123				ONSEMI	SZ1SMA30CAT3G	No	Yes
D9	1	Schottky Diode, 40V/2A, SMB				ONSEMI	NRVBS240LNT3G	No	Yes
D19	1	Switch Diode, Ultra-Fast Recovery, 50V/1A, SMA				ONSEMI	SURA8105T3G	No	Yes
D20	1	CAN Bus Protrector, SOT-23				ONSEMI	ESDONCAN1LT1G	No	Yes
K1	1	Star Point Relay SPR, 90A, 32x17.5x18				Tyco Electronics	V23135-W1001	No	Yes
L1	1	Power Inductor, 1uH/60A				TDK	B82559B-A027	No	Yes
L2	1	Power Inductor, 4.7uH/5.6A				TDK	SPM6530T-4R7M	No	Yes
LED1	1	19-217 SMD LED, 0603, Green				EVERLIGHT	19-217/GHC-YR1S2/3T	No	Yes
LED2	1	19-217 SMD LED, 0603, Green				EVERLIGHT	19-217/GHC-YR1S2/3T	No	Yes
P1	1	9.5mm Connector, 2P				KANGNEX	HB9500-9.5-2P	No	Yes
P2	1	3.96mm Connector, 4P				KANGNEX	HT396R-3.96-4P	No	Yes
P3	1	3.96mm Connector, 5P				KANGNEX	HT396R-3.96-5P	No	Yes
P4	1	9.5mm Connector, 6P				KANGNEX	HB9500-9.5-6P	No	Yes
P5	1	3.96mm Connector, 8P				KANGNEX	HT396R-3.96-8P	No	Yes
P6, P7	2	2.54mm Pitch Connector, 20P				CJT	A2541HWV-20P	No	Yes
Q1	1	N-Channel MOSFET, 40V,240A, H-PSOF8L				ONSEMI	FDBL9406-F085T	No	Yes
R1	1	Resistance, 0805, 10K/1%				VISHAY	CRCW080510K0FKEA	No	Yes
R2, R11	2	Resistance, 0603, 47K/1%				VISHAY	CRCW060347K0FKEA	No	Yes
R3, R6, R34, R36, R38, R40, R42, R44	8	Resistance, 0603, 100K/1%				VISHAY	CRCW0603100K0FKEA	No	Yes
R4, R7, R12, R13, R32, R45, R46, R47, R57, R58, R59, R60, R62, R111, R112	15	Resistance, 0603, 10K/1%				VISHAY	CRCW060310K0FKEA	No	Yes
R5, R63, R64	3	Resistance, 1206, 0R/1%				VISHAY	CRCW1206000Z0EA	No	Yes
R8	1	Resistance, 0603, 470R/1%				VISHAY	CRCW0603470R0FKEA	No	Yes
R9	1	Resistance, 0603, 88.7R/1%				VISHAY	CRCW0603887R0FKEA	No	Yes
R10, R52, R53, R55, R56, R61, R107	7	Resistance, 0603, 1K/1%				VISHAY	CRCW06031K00FKEA	No	Yes
R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R105, R106	13	Resistance, 0603, 33R/1%				VISHAY	CRCW060333R0FKEA	No	Yes
R25	1	Resistance, 0805, 0R/1%				VISHAY	CRCW0805000Z0EA	No	Yes