

TSV AMS Boards Bill of Materials

Reference Designator	Value	Description	Manufacturer	Manufacturer P/N	Supplier	Supplier P/N	Unit Cost
C1	0.1uF	CAP CER 0.1UF 25V X7R 0805	Murata Electronics North America	GRM21BR71E104KA01L	DigiKey	490-1673-1-ND	\$0.19
C2	0.01uF	CAP CER 10000PF 25V X7R 0805	Murata Electronics North America	GRM216R71E103KA01D	DigiKey	490-12748-1-ND	\$0.10
C3	22uF	CAP CER 22UF 25V X5R 0805	Murata Electronics North America	GRT21BR61E226ME13L	DigiKey	490-12389-1-ND	\$0.58
C4	22uF	CAP CER 22UF 25V X5R 0805	Murata Electronics North America	GRT21BR61E226ME13L	DigiKey	490-12389-1-ND	\$0.58
C5	10uF	CAP CER 10UF 25V X6S 0805	Murata Electronics North America	GRM21BC81E106KE51L	DigiKey	490-10502-1-ND	\$0.26
C6	0.1uF	CAP CER 0.1UF 25V X7R 0805	Murata Electronics North America	GRM21BR71E104KA01L	DigiKey	490-1673-1-ND	\$0.19
C7	0.1uF	CAP CER 0.1UF 25V X7R 0805	Murata Electronics North America	GRM21BR71E104KA01L	DigiKey	490-1673-1-ND	\$0.19
C8	0.1uF	CAP CER 0.1UF 25V X7R 0805	Murata Electronics North America	GRM21BR71E104KA01L	DigiKey	490-1673-1-ND	\$0.19
C9	10uF	CAP CER 10UF 25V X6S 0805	Murata Electronics North America	GRM21BC81E106KE51L	DigiKey	490-10502-1-ND	\$0.26
C10	0.1uF	CAP CER 0.1UF 25V X7R 0805	Murata Electronics North America	GRM21BR71E104KA01L	DigiKey	490-1673-1-ND	\$0.19
C13	1uF	CAP CER 1UF 25V X7R 0805	Murata Electronics North America	GRM21BR71E105KA99L	DigiKey	490-6484-1-ND	\$0.13
D1		DIODE SCHOTTKY 20V 500MA SOD123	Fairchild/ON Semiconductor	MBR0520L	DigiKey	MBR0520LCT-ND	\$0.34
LN1 - Banana Jack Nut		Low-Strength Steel Thin Nylon-Insert Locknut, Zinc-Plated, 6-32 Thread Size	McMaster-Carr	90633A007	McMaster-Carr	90633A007	\$2.91
LN2 - Banana Jack Nut		Low-Strength Steel Thin Nylon-Insert Locknut, Zinc-Plated, 6-32 Thread Size	McMaster-Carr	90633A007	McMaster-Carr	90633A007	\$2.91
LN3		18-8 Stainless Steel Nylon-Insert Locknut, 4-40 Thread Size	McMaster-Carr	91831A005	McMaster-Carr	91831A005	\$3.83
LN4		18-8 Stainless Steel Nylon-Insert Locknut, 4-40 Thread Size	McMaster-Carr	91831A005	McMaster-Carr	91831A005	\$3.83
W1		Zinc-Plated Steel SAE Washer for Number 6 Screw Size, 0.156" ID, 0.375" OD	McMaster-Carr	90126A509	McMaster-Carr	90126A509	\$1.35
W2		Zinc-Plated Steel SAE Washer for Number 6 Screw Size, 0.156" ID, 0.375" OD	McMaster-Carr	90126A509	McMaster-Carr	90126A509	\$1.35
S1		18-8 Stainless Steel Phillips Rounded Head Screw, 4-40 Thread Size, 3/8" Long	McMaster-Carr	91772A108	McMaster-Carr	91772A108	\$4.30
S2		18-8 Stainless Steel Phillips Rounded Head Screw, 4-40 Thread Size, 3/8" Long	McMaster-Carr	91772A108	McMaster-Carr	91772A108	\$4.30
BJ1		BANANA PLUG .500" 6-32 EXT THD	Keystone Electronics	655	Digikey	36-655-ND	\$2.56
BJ2		BANANA PLUG .500" 6-32 EXT THD	Keystone Electronics	655	Digikey	36-655-ND	\$2.56
J2		CONN HDR VERT 6POS .100 TIN	Molex LLC	705430040	Digikey	WM4828-ND	\$1.07
J3		CONN HDR VERT 6POS .100 TIN	Molex LLC	705430040	Digikey	WM4828-ND	\$1.07
Q1		TRANS NPN DARL 100V 8A TO-220	Fairchild/ON Semiconductor	TIP102	Digikey	TIP102-ND	\$0.91
Sw1		Tactile Switches TACTSWITCH SMT	TE Connectivity	FSM4J5MAATR	Mouser Electronics	506-FSM4J5MAATR	\$0.28
U1		IC OPAMP GP 550KHZ RRO 8SOIC	Microchip Technology	MCP6242-E/SN	Digikey	MCP6242-E/SN-ND	\$0.37
U2		IC REG BOOST ADJ 0.6A 8SOIC	Linear Technology	LT1307BCS8#PBF	Digikey	LT1307BCS8#PBF-ND	\$4.15
U4		IC MCU 8BIT 7KB FLASH 18SOIC	Microchip Technology	PIC16LF1827-I/SO	Digikey	PIC16LF1827-I/SO-ND	\$1.47
U5A/U5B		analog Hall Effect Sensor, 1.5 mA, 2.7 - 6.5 V dc	Honey Well	SS39ET	HoneyWell	70238605	\$1.19
U6		Transistor Output Optocouplers Optocoupler Phototrans	Life-ON	LTV-357T	Mouser Electronics	859-LTV-357T	\$0.21
U7		DGTL ISO 2.5KV 2CH I2C 8SOIC	Silicon Labs	SI8600AB-B-IS	Digikey	SI8600AB-B-IS-ND	3.36
D2		LED RED DIFFUSED 0805 SMD	OSRAM Opto Semiconductors Inc.	LS R976-NR-1	Digikey	475-1278-1-ND	\$0.26
D3		LED YELLOW DIFFUSED 0805 SMD	OSRAM Opto Semiconductors Inc.	LY R976-PS-36	Digikey	475-2560-1-ND	\$0.26
D4		LED GREEN DIFFUSED 0805 SMD	OSRAM Opto Semiconductors Inc.	LG R971-KN-1	Digikey	475-1410-1-ND	\$0.25
L1		FIXED IND 10UH 3.1A 50 MOHM SMD	Bourns Inc	SRN8040-100M	Digikey	SRN8040-100MCT-ND	\$0.57
R1	470Ω	RES SMD 470 OHM 5% 1/8W 0805	Panasonic Electronic Components	ERJ-6GEYJ471V		P470ADKR-ND	\$0.10
R2	10kΩ	RES SMD 10K OHM 5% 1/8W 0805	Panasonic Electronic Components	ERJ-6GEYJ103V	Digikey	P10KACT-ND	\$0.10
R3	1.02MΩ	RES SMD 1.02M OHM 1% 1/8W 0805	Panasonic Electronic Components	ERJ-6ENF1024V	Digikey	P1.02BTCT-ND	\$0.10
R4	324kΩ	RES SMD 324K OHM 1% 1/8W 0805	Panasonic Electronic Components	ERJ-6ENF3243V	Digikey	P324KCCT-ND	\$0.10
R5	100kΩ	RES SMD 100K OHM 1% 1/8W 0805	Panasonic Electronic Components	ERJ-6ENF1003V	Digikey	P100KCCT-ND	\$0.10
R6	470Ω	RES SMD 470 OHM 5% 1/8W 0805	Panasonic Electronic Components	ERJ-6GEYJ471V	Digikey	P470ADKR-ND	\$0.10
R7	470Ω	RES SMD 470 OHM 5% 1/8W 0805	Panasonic Electronic Components	ERJ-6GEYJ471V	Digikey	P470ADKR-ND	\$0.10
R8	383Ω	RES SMD 383 OHM 1% 1/8W 0805	Panasonic Electronic Components	ERJ-6ENF3830V	Digikey	P383CCT-ND	\$0.10
R9	470Ω	RES SMD 470 OHM 5% 1/8W 0805	Panasonic Electronic Components	ERJ-6GEYJ471V	Digikey	P470ADKR-ND	\$0.10
R10	100kΩ	RES SMD 100K OHM 1% 1/8W 0805	Panasonic Electronic Components	ERJ-6ENF1003V	Digikey	P100KCCT-ND	\$0.10

R11	200kΩ	RES SMD 200K OHM 5% 1/8W 0805	Panasonic Electronic Components	ERJ-6GEYJ204V	Digikey	P200KACT-ND	\$0.10
R12	10kΩ	RES SMD 10K OHM 5% 1/8W 0805	Panasonic Electronic Components	ERJ-6GEYJ103V	Digikey	P10KACT-ND	\$0.10
R13	10kΩ	RES SMD 10K OHM 5% 1/8W 0805	Panasonic Electronic Components	ERJ-6GEYJ103V	Digikey	P10KACT-ND	\$0.10
R14	1kΩ	RES SMD 1K OHM 5% 1/8W 0805	Panasonic Electronic Components	ERJ-6GEYJ102V	Digikey	P1.0KACT-ND	\$0.10
RPOW	0.75Ω	RES 0.75 OHM 20W 1% TO220	Bourns Inc	PWR220T-20-R750F	Digikey	PWR220T-20-R750F-ND	\$4.00
U3		IC REG LDO 3.3V 0.5A SOT223-3	Microchip Technology	MCP1825S-3302E/DB	Digikey	MCP1825S-3302E/DB-ND	\$0.53
PCB		AMS PCB V1.1 Designed by: W Stathis	Lafayette	L17-TSV-2	33each.com		\$33.00
W1		Screws & Fasteners INSUL SHOULDER WASHR TO-220	Aavid Thermalloy	7721-7PPSG	Mouser Electronics	532-7721-7PPS	\$0.16
HS		Heat Sinks TO-220 W/PINS BLK 2"	Wakefield-Vette	657-10ABPE	Mouser Electronics	567-657-10ABPE	\$1.66
HS-Screw		Low Strength Steel Nylon-Insert Locknut Zinc-Plated, 2	McMaster-Carr	90272A087	McMaster-Carr	90272A087	\$5.98 per 50
HS-Nut		Steel Phillips Rounded Head 2-56 Thread, 1-1/4" Long	McMaster-Carr	90631A003	McMaster-Carr	90631A003	\$3.37 per 100