

Bill of Materials for the STR-DMS-NCV7694-GEVK Evaluation Kit

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C1	1	MLC capacitor 470pF 50V C0G 5% Murata	470 pF	±5%	0402 (1005 Metric)	Murata	GRM1555C1H471JA01D	Yes	Yes
C2	1	MLCC capacitor 4.7µF 50V X5R ± 10% TDK	4.7 µF	±10%	0805 (2012 Metric)	TDK	C2012XSR1H475K125AB	Yes	Yes
C3, C4	2	MLC capacitor 100nF 10V X7R 5% Murata	100 nF	±5%	0402 (1005 Metric)	Murata	GRM155R71A104JA01D	Yes	Yes
C5	1	MLC capacitor 4n7 16V X7R 5% Murata	4n7	±5%	0402 (1005 metric)	Murata	GRM155R71CA72JA01D	Yes	Yes
C6, C7	2	Multilayer Ceramic Capacitors MLCC - SMD 0805 25 V 22 µF X5R ± 20 % AEC-Q202 Murata	22 µF	±20%	0805 (2012 Metric)	Murata	GRT218R61E226ME13L	Yes	Yes
C8	1	MLC capacitor 100nF 50V X7R 10% Murata	100 nF	±10%	0603 (1608 Metric)	Murata	GRM188R71H104KA93D	Yes	Yes
C9, C10, C11, C12	4	SMD Tantalum Polymer, 150 uF, 15V, 20%, AEC-Q200 Kemet	150 uF	±20%	2917 (7343 Metric)	Kemet	T598D157M016ATE065	Yes	Yes
CABLE1	1	Wire cable assembly 3pins, dual pin1 to pin1 connectors, 1mm pitch, 2.16 inch length Samtec	wire cable assembly S155-03-28-GF-02.16-L1	-	-	Samtec	S155-03-28-GF-02.16-L1	Yes	Yes
CABLE2	1	Wire cable assembly 3pins, 1 side connector, 1mm pitch, 3.00 inch length Samtec	wire cable assembly S155-03-28-GF-03.00-L	-	-	Samtec	S155-03-28-GF-03.00-L	Yes	Yes
CABLE3	1	FFC cable 6 contacts 0.5mm pitch 152mm length opposite sided contacts Würth Elektronik	FFC cable 6 pins 0.5pmm pitch opposite sided contacts	-	-	Würth Elektronik	687706152002	Yes	Yes
CON1	1	FPC vertical connector vertical 6pins, 0.5 mm pitch Amphenol FCI	F31G-1A7H1-11006	-	-	Amphenol FCI	F31G-1A7H1-11006	Yes	Yes
CON2	1	SMD vertical shrouded header 1mm pitch, 3pins Samtec	T1M-03-T-SV-L-P	-	-	Samtec	T1M-03-T-SV-L-P	Yes	Yes
D1	1	Switching diode 100V 200mA SOD323 AEC-Q101 ON Semiconductor	SBA516H	-	SC-76, SOD-323	ON Semiconductor	SBA516H1G	No	Yes
D2	1	Trench Schottky Rectifier, Very Low Leakage, 60V, 5A, ON Semiconductor	NRVTS560ETF5	-	WDFN-8	ON Semiconductor	NRVTS560ETF5TWG	No	Yes
D3	1	Schottky diode 30V 1A AEC-Q101 ON Semiconductor	NRVBS513HE	-	2-SMD, Flat Lead	ON Semiconductor	NRVBS513HE	No	Yes
D4, D5	2	High Power IR LED OSLOM Black series Osram	SFH 4725S	-	3-SMD, No Lead	Osram	SFH 4725S	Yes	Yes
HS1	1	Heatsink LED21SHELL body Suzhou BIOsilicon Semiconductor	heatsink LED21SHELL body	-	-	Suzhou BIOsilicon Semiconductor	LED21SHELL_Body	Yes	Yes
HS2	1	Heatsink LED21SHELL thermal cover Suzhou BIOsilicon Semiconductor - customized milling	heatsink LED21SHELL thermal cover customized milling	-	-	Suzhou BIOsilicon Semiconductor	LED21SHELL_Thermal cover	Yes	Yes
L1	1	Shielded power inductors 8.2µH 4.1 A AEC-Q200 Coilcraft	8.2 µH	-	Nonstandard	Coilcraft	XGL4020-822MEC	Yes	Yes
LENS1, LENS2	2	LED Lighting Lenses LEDIL	lens and holder for LEDs	-	-	LEDIL	FP13026_LISA2-WW-PIN	Yes	Yes
PAD1	1	Thermal pad MPGCSP15USGF-200-2.0 Multicomp modified for LED21SHELL	thermal pad MPGCSP15USGF-200-2.0 modified for LED21SHELL	-	-	Multicomp	MPGCSP15USGF-200-2.0	Yes	Yes
PAD2	1	Thermal pad MPGCSP15USGF-200-1.5 Multicomp modified for LED21SHELL	thermal pad MPGCSP15USGF-200-1.5 modified for LED21SHELL	-	-	Multicomp	MPGCSP15USGF-200-1.5	Yes	Yes
R1	1	SMD thick film resistor 47k5 0603 0.5% 100 mW Panasonic AEC-Q200	47k5	±0.5%	0603 (1608 Metric)	Panasonic	ERA3AED4752V	Yes	Yes
R2, R3	2	SMD thick film resistor 5k1 0402 1% 100 mW Panasonic	5k1	±1%	0402 (1005 metric)	Panasonic	ERJ2RKF5101X	Yes	Yes
R4	1	SMD thick film resistor 909R 0603 1% 100 mW Panasonic	909R	±1%	0603 (1608 Metric)	Panasonic	ERJ3EKF9090V	Yes	Yes
R5	1	SMD thick film resistor 909R 0603 1% 100 mW Panasonic	909R	±1%	0603 (1608 Metric)	Panasonic	ERJ3EKF9099V	Yes	Yes
R6	1	SMD thick film resistor 562R 0603 1% 100 mW Panasonic	562R	±1%	0603 (1608 Metric)	Panasonic	ERJ3EKF5620V	Yes	Yes
R7	1	SMD thick film resistor 51R 0402 1% 100 mW Panasonic	51	±1%	0402 (1005 metric)	Panasonic	ERJ2RKF51R0X	Yes	Yes
R8	1	SMD thick film resistor 30k 0402 1% 100 mW Panasonic	30k	±1%	0402 (1005 metric)	Panasonic	ERJ2RKF3002X	Yes	Yes
R9	1	SMD thick film resistor 2k15 0603 0.5% 100 mW Panasonic AEC-Q200	2k15	±0.5%	0603 (1608 Metric)	Panasonic	ERA3AED2151V	Yes	Yes
R10	1	SMD thick film resistor 4.02k 0402 1% 100 mW AEC-Q200 Panasonic	4k02	±1%	0402 (1005 metric)	Panasonic	ERJ-2RKF4021X	Yes	Yes
R11	1	SMD thick film resistor 200R 0402 1% 100 mW Panasonic	200	±1%	0402 (1005 metric)	Panasonic	ERJ2RKF2000X	Yes	Yes

R_ILLED	1	SMD Current Sense Chip Resistor, 68 mOhm, 400 mW, 0603 [1608 Metric], Thick Film, AEC-Q200, VISHAY	0R068	±1%	0603 (1608 Metric)	Vishay	WSLP0603R0680FEA	Yes	Yes
REMC1, REMC2	2	SMD thick film resistor 1k 0603 1% 100 mW Panasonic	1k	±1%	0603 (1608 Metric)	Panasonic	ERJ3EKF1001V	Yes	Yes
REMC3	1	SMD thick film resistor 200R 0603 1% 100 mW Panasonic	200R	±1%	0603 (1608 Metric)	Panasonic	ERJ3EKF2000V	Yes	Yes
REMC4	1	SMD thick film resistor 750R 0603 0.5% 100 mW Panasonic AEC-Q200	750R	±0.5%	0603 (1608 Metric)	Panasonic	ERA3AED751V	Yes	Yes
RETL	1	SMD thick film resistor 15k 0603 0.5% 100 mW Panasonic AEC-Q200	15k	±0.5%	0603 (1608 Metric)	Panasonic	ERA3AED153V	Yes	Yes
RFRL	1	SMD thick film resistor 820R 0603 1% 100 mW Panasonic	820R	±1%	0603 (1608 Metric)	Panasonic	ERJ3EKF8200V	Yes	Yes
SCREW1, SCREW2, SCREW3, SCREW4	4	M1.4 x 5mm Phillips pan head machine screw black stainless steel	pan head machine screw M1.4x5	-	-	-	-	Yes	Yes
U1	1	Buck Switching Regulator, Automotive, 2 A, 2 MHz ON Semiconductor	NCV890204	-	12-VDFN Exposed Pad	ON Semiconductor	NCV890204MMWR2G_2	No	Yes
U2	1	Safety Controller for Infra-RedLED Illumination ON Semiconductor	NCV7694MMWR2G	-	10-VDFN Exposed Pad	ON Semiconductor	NCV7694MMWR2G	No	Yes
U3	1	Single N-Channel Power MOSFET 40V, 26A, 14mQ, ON Semiconductor	NVF55C478NLTAG	-	8-PowerWDFN	ON Semiconductor	NVF55C478NLTAG	No	Yes