

SPECIFICATIONS & FUNCTIONAL DESCRIPTION

SR5909 - TRANSMITTER

1.0 DESCRIPTION

The SR5909 is a Stanley garage door replacement, low-power hand held remote control device operating at a frequency of 310 MHz. The signal output is a binary-coded, pulse-position type A1D modulated transmission which has an information rate of approximately 1670 bits per second (bps). It is coded by SecureCode® formatted wireless data for the Stanley garage door operators.

Actuating any of the three push buttons illuminates a light-emitting diode (LED) and activates the transmitter. Releasing the push-button immediately terminates transmission. Transmission time is limited to 20 seconds if button is held on.

2.0 FUNCTIONAL DESCRIPTION

The push-button switches, S1-3, applies power to the unit and activates L.E.D. (D1).

Digital encoding is a function of microprocessor, U1. An internally generated microcontroller clock runs at approximately 4MHz and creates the coding and timing sequence. There are over 4 billion (4×10^9) possible code combinations. Coding is done during manufacture and is not user accessible.

The RF oscillator / output transistor Q1 functions as a tuned Colpitts power oscillator whose feedback is primarily determined by C3. The frequency of oscillation is controlled by variable capacitor C5. The inductive trace load E1 is configured on the circuit board as the principle-radiating element. Emitter resistor R7, in conjunction with the base bias resistors R5 and R6, regulates the power output of the oscillator.

Because of the transmitter's small size, its radiation pattern is similar to that of an elementary dipole.

3.0 SPECIFICATIONS

Product Identification:	SR5909, Three channel garage door transmitter
Encoding Technique:	A1D Pulse position Modulation at 1670 bits/sec.
Number of codes:	$> 4 \times 10^9$
RF Carrier Frequency:	310 MHz $\pm$ 500 KHz
Power Requirements:	6 VDC - 2 - 3 volt #2016 coin cell lithium batteries, 12 mA maximum current - operating, < 1 uA standby
Operating Temperature Range:	0 to 50 °C Tested -30 to +70 °C
Timing:	20-second maximum transmission per activation
Size:	3.75" x 2.15" x 0.90" (approx.)

All specifications nominal unless specified.

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LINEAR CORPORATION

EFFECTIVITY DATE: ALL

S I N G L E L E V E L B I L L S O F

PARENT PART: SHA24711

F/G SR-5909,TR310,3PB,CODE HOP UM
ERC: # SRCE CODE: P TYPE: * ABC

ITEM NO	COMPONENT PART NUMBER/ UM PART DESCRIPTION-REMARKS	ERC	PRODUCT CODE	COMM CODE	S T S A P C Y P B L	EXTENDED QTY PER
0001	220639-01 EA ASSY,MECH,SR-5909	3	NP	99	P * P * P	1
0002	220646 EA ARTWORK,CARD,INSTR,SR-5909	#	NP	CE	P * P * P	1
0003	220285 EA CLAMSHELL,FRONT,W3BR	A	NP	DC	P * P * P	1
0004	220286 EA CLAMSHELL,BACK,5.45 X 9.45	A	NP	DC	P * P * P	1
0005	220291 EA INSERT,5POS DISPLAY,4.55 WIDE SLOT	A	NP	DC	P * P * P	0.200000
0006	220302 EA BOX,DISPLAY,9.49 X 6.42 X 9.24	A	NP	CU	P * P * P	0.200000
0007	220303 EA BOX,COVER DISPLAY,9.65 X 6.58 X 9.40	A	NP	CU	P * P * P	0.200000
0008	810780 EA LABEL,BAR,MSTR CTN,SR-5909	#	NP	CE	P * P * P	0.400000
0009	910780 EA LABEL,BAR,SHPG CTN,SR-5909	#	NP	CE	P * P * P	0.050000
0010	202937 EA CTN,SHPG,SSR32,533X377X282	A	99	CU	P * P * P	0.050000
0011	210054 EA ANTI-THEFT SENSOR	E	99	BG	P * P * P	1
0012	200640 EA TAPE,PACKING,SELF ADHESIVE,3",BROWN FLOOR STOCK	B	99	AE	X 1 S C P	0
0990	220183 EA F/G W3BR	A	NP	DC	P * P * P	0
0991	220642 EA SPECS,SR-5909	#	NP	DC	P * P * P	0
0992	220643 EA BLOCK DIAGRAM,SR-5909	#	NP	DC	P * P * P	0
0993	220295 EA TOOL,HEAT STAKE,W3BR	A	NP	BN	P * P * P	0
0994	710780 EA LABEL,UPC,SINGLE BOX,SR-5909	#	NP	CE	P * P * P	0

NOTES:

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LINEAR CORPORATION

EFFECTIVITY DATE: ALL

S I N G L E L E V E L B I L L S O F

PARENT PART: 220639-01

ASSY,MECH,SR-5909

UM

ERC: 3

SRCE CODE: P TYPE: * ABC

ITEM NO	COMPONENT PART NUMBER/ UM PART DESCRIPTION-REMARKS	ERC	PRODUCT CODE	COMM CODE	S C	T Y	S P	A B	P L	EXTENDED QTY PER
0001	220641-01 EA ASSY,PCB,SR-5909	#	NP	99	P	*	P	*	P	1
0002	217214-001 EA CASE,FRONT,3 PB,VISOR XMTR,BLACK	C	NP	DC	P	*	P	*	P	1
0003	217215-001 EA CASE,REAR,3 PB,VISOR XMTR,BLACK	C	NP	DC	P	*	P	*	P	1
0004	217216-003 EA BUTTON,3 PB,VISOR XMTR,PMS293,BLUE	#	NP	DC	P	*	P	*	P	1
0005	217239 EA CLIP,BATTERY,2016	A	NP	DC	P	*	P	*	P	1
0006	214829 EA CLIP,VISOR,MULTICODE	A	99	CG	P	*	P	*	P	1
0007	213691 EA SCR,TF,TYP B,4X5/16,FLH,PH,S/BLK OX	B	NP	CG	P	*	P	*	P	1
0008	220647 EA LABEL,FCC/DOC,SR-5909	#	NP	CE	P	*	P	*	P	1
0009	202732 EA BATT,3V,LITHIUM,2016	A	99		P	*	P	*	P	2
0011	202847 EA LABEL,WARR/DATE,1 YEAR,GRAY	C	99	BT1,2 CE	X	*	P	*	P	1
0990	217123 EA ASSY,MECH,GT-30,3 PB,VISOR XMTR	B	NP	DC	P	*	P	*	P	0
0992	216430 EA DIE-CUT,LABEL,FCC,MINI/MICRO	A	NP	REFERENCE ONLY CE	P	*	P	*	P	0

NOTES:

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EFFECTIVITY DATE: ALL

S I N G L E L E V E L B I L L S O F

PARENT PART: 220641-01

ASSY,PCB,SR-5909

UM

ERC: # SRCE CODE: P TYPE: * ABC

ITEM NO	COMPONENT PART NUMBER/ UM PART DESCRIPTION-REMARKS	ERC	PRODUCT CODE	COMM CODE	S T S A P C Y P B L	EXTENDED QTY PER
0001	220640 EA PCB,SR-5909	#	NP	DB	P * P * P	1
0002	213812 EA IC,HC201,CODE HOP ENCODER,SO-8	B	NP	BW	P * P * P	1
0003	103877-001 EA SWITCH,PUSH,MOM,260GF,6X6MM,UL	E	99	EG	P * P B P	3
0004	210643 EA LED,RED,T-1,RED TRANS,20 DEG	B	99	CM	P * P * P	1
0005	205011-006 EA DIODE,BAV70,DUAL,COM CATH,SOT-23	B	99	EX	P * P C P	1
0006	205011-001 EA DIODE,MMD914,SWITCH,SOT-23	D	99	BF	P 1 P C P	1
0007	101779 EA INDCTR,2.2UH,ENCAP,10%	C	99	BP	P 1 P C P	1
0008	203691-001 EA CAP,VAR,2.5-10PF,SMD	F	99	AR	P * P C P	1
0009	219134 EA XSTR,NPN,BFR92A,SOT-23	A	NP	EN	P * P * P	1
0011	213383-103 EA RES,CHIP,1/16W,10K,0603,5%	A	NP	DQ	P * P * P	3
0012	213383-102 EA RES,CHIP,1/16W,1.0K,0603,5%	A	NP	DQ	P * P * P	1
0013	213383-333 EA RES,CHIP,1/16W,33K,0603,5%	A	NP	DQ	P * P * P	1
0014	213383-682 EA RES,CHIP,1/16W,6.8K,0603,5%	A	NP	DQ	P * P * P	1
0015	213383-181 EA RES,CHIP,1/16W,180,0603,5%	A	NP	DQ	P * P * P	1
0017	213419 EA CAP,CER,C,16V104P,X7R,10%,0603	C	NP	AO	P * P * P	1
0018	213430-056 EA CAP,CER,C,50V5R6P,COG,.5PF,0603	B	NP	AO	P * P * P	2
0019	213391 EA CAP,CER,C,50V102P,X7R,10%,0603	B	NP	AO	P * P * P	1
0020	213418 EA CAP,CER,C,50V1R0P,NPO,0603,+/- .25PF	A	NP	AO	P * P * P	1
0021	104242 FT WIRE,22,SLD,BARE,BULK	E	99	ES	X 1 P C P	0
0022	200691 EA LABEL,DATE CODE,PRODUCTION,.5"X.2"	B	99	CE	X 1 S C P	1
0990	220641 EA ASSY,PCB,SR-5909	#	NP	DC	P * P * P	0
0991	220644 EA SCHEM,SR-5909	#	NP	DC	P * P * P	0
0992	220645 EA TEST PROC,SR-5909	#	NP	DC	P * P * P	0