

FUNCTIONAL DESCRIPTION

1.0 DESCRIPTION

The DXS-65 is a one channel, fixed or semi portable emergency signaling transmitter operating as a low power communication device. The center frequency is SAW stabilized at 315 MHz. The data output is DX Code formatted. The transmitter case is grey plastic with a red "HELP" push button.

The DXS-65 and the DX Code format are designed for use with Linear DX format 315 MHz receivers and consoles. Typical receivers that could be used with this transmitter are the DXR-701/2, DXSR-1504/8, DVS-1200/2400, Dual 824 and PERS-2400.

Each DXS-65 is programmed with a DX format factory ID code. The DX format code gives over 1 million possible transmitter IDs.

Two lithium coin cell batteries, type 2032, are included. The batteries should last about 4 years under normal use.

If the transmit push button is held down for more than 5 seconds continuously, the DXS-65 will go into a supervisory mode. It will thereafter send status transmissions every 1.2 hours. This supervisory signal will continue until the batteries are removed and replaced.

2.0 FUNCTION

When any of the four push buttons are depressed, U1-7 becomes low and activates U1's program. U1-4 provides a latch signal to Q1 to keep the microprocessor alive until a minimum of 8 words (800 milli second duration) are transmitted.

After the 8 words are transmitted and if the switches are now open, the processor turns off. If the button is held down for more than 10 seconds, the transmitter's output is then disabled.

When U1 wakes up, it outputs signals to turn on the oscillator, Q2, and to provide DX code data to the RF amplifier, Q3. The frequency of oscillator Q2 is stabilized at 315 MHz by surface acoustic wave (SAW) resonator FR1. Data output at U1-3 modulates the base of transistor Q3 which transmits the pulse-modulated carrier via the antenna, E1.

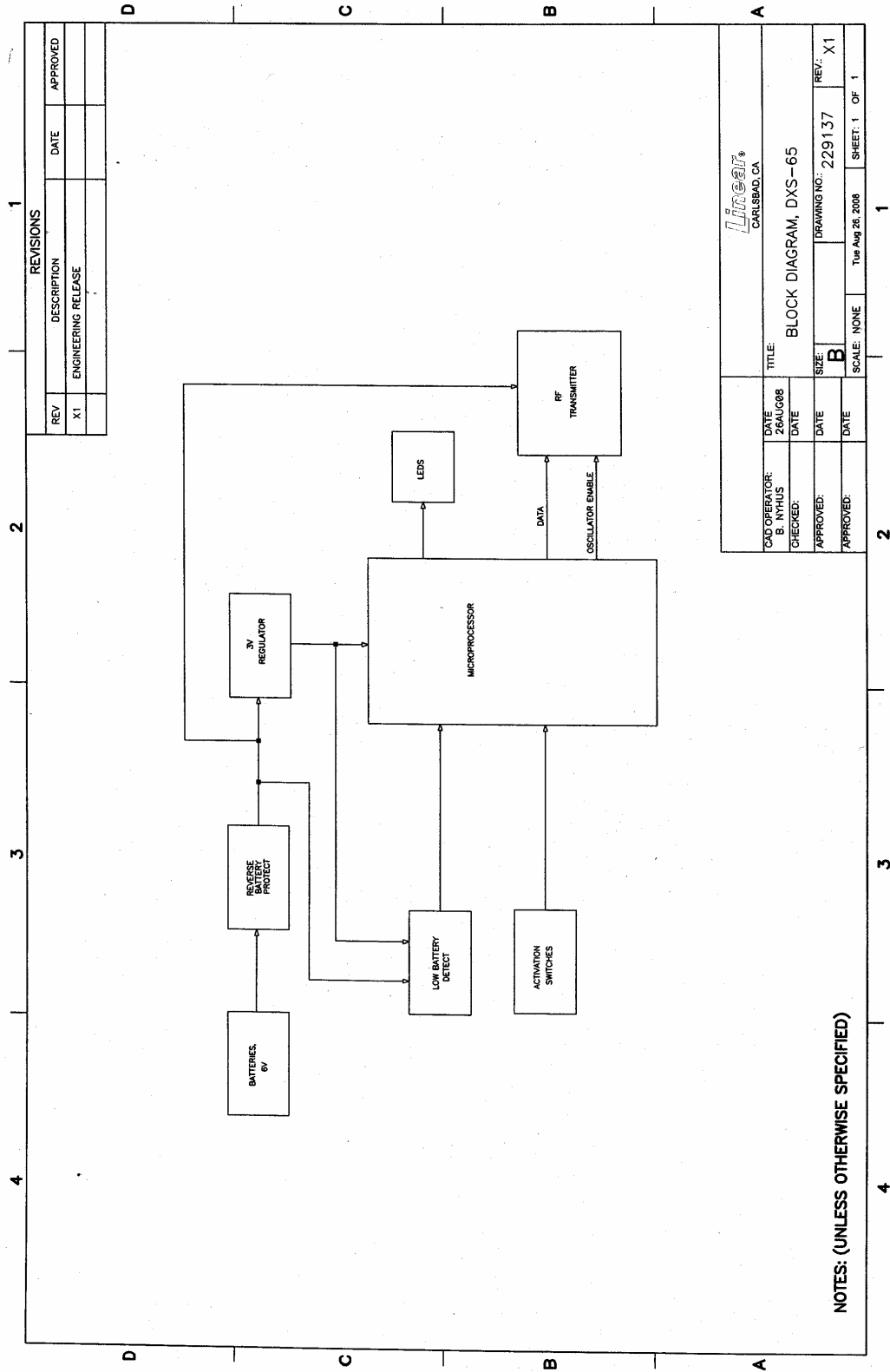
The battery voltage is supervised by voltage detector U2. If the nominal 6.0 Volt battery Voltage drops below 4.3 Volts the transmissions will include a low battery signal bit.

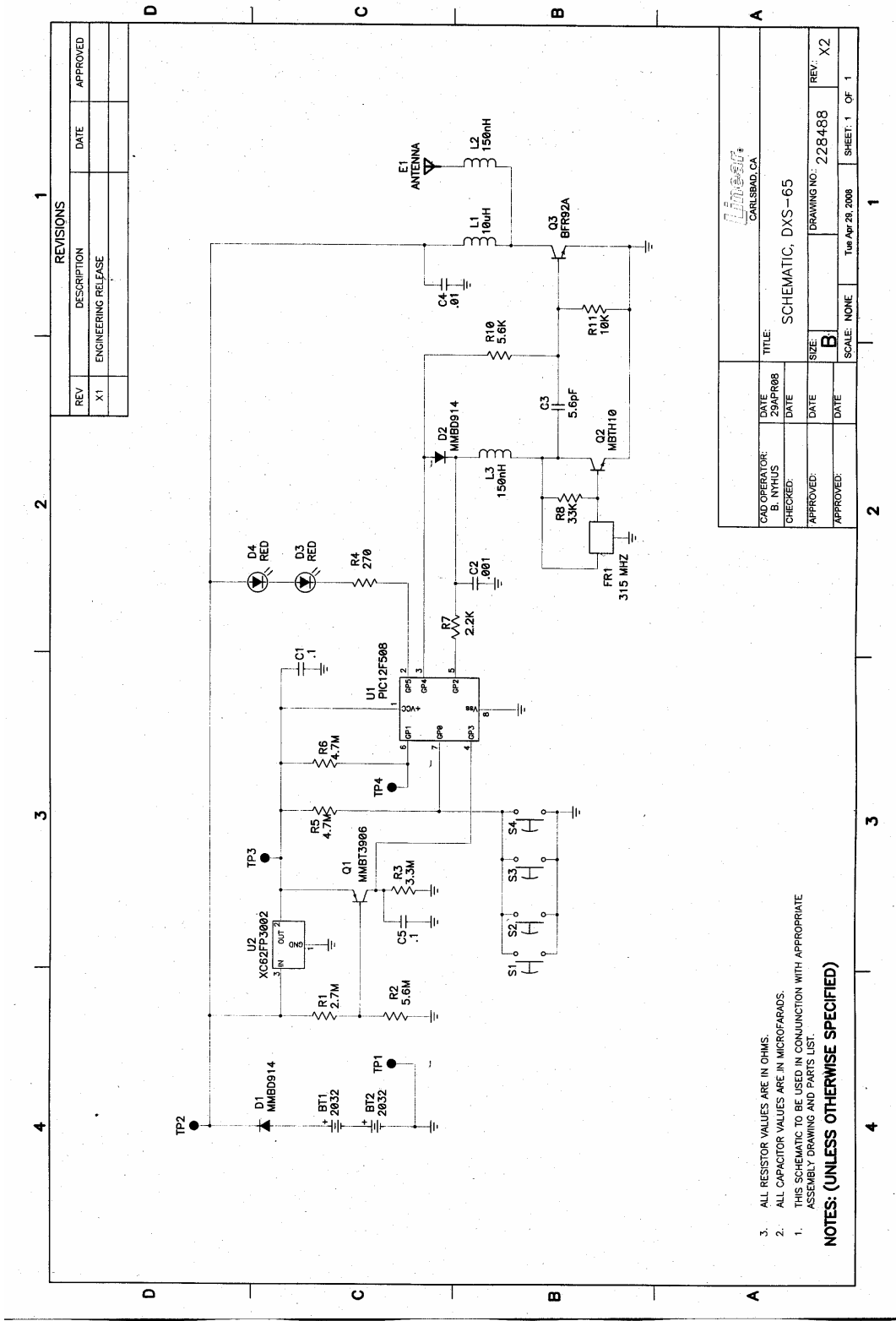
3.0 SPECIFICATIONS

Product Identification:	DXS-65 transmitter (SST00121).
Encoding Format:	Linear DX Code.
Encoding Technique:	Transmitters are factory coded with a sequential transmitter ID number.
Number of Channels:	One

Timing:	Transmission stops after 10 seconds when button is held on. When momentarily activated the transmitter sends a minimum of 8 data words (800 milli seconds transmission).
RF Carrier Frequency:	315.00 MHz \pm 250 KHz.
Power Requirements:	Two 2032, 3 volt batteries.
Visual Indicator:	Two surface mount red LEDs.
Operating Temperature:	0° C to +70° C. Tested –30° C to 70° C.
Size:	1.5" x 3.0" x 0.5"
Current Consumption:	10 mA (average) transmitting. <5 uA Standby.

All specifications are nominal unless otherwise noted.





NOTES: (UNLESS OTHERWISE SPECIFIED)

1. THIS SCHEMATIC TO BE USED IN CONJUNCTION WITH APPROPRIATE ASSEMBLY DRAWING AND PARTS LIST.
2. ALL CAPACITOR VALUES ARE IN MICROFARADS.
3. ALL RESISTOR VALUES ARE IN OHMS.

CAD OPERATOR:		DATE	29APR08
CHECKED:		DATE	
APPROVED:		DATE	
APPROVED:		DATE	
TITLE:		SCHEMATIC, DXS-65	
DRAWING NO:		228488	
REV:		X2	
SCALE:		NONE	
SHEET:		1 OF 1	

SECTION 9

PRINTED 30-Jul-08 09:44 AM

LINEAR LLC

EFFECTIVITY DATE: ALL

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

PARENT PART: SST00121

F/G DXS-65

ERC: #

SRCE CODE: P

TYPE: *

UM

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	228484-01 EA ASSY, MECH, DXS-65	#	NP	99	P * P E P	1
0002	200921 EA BAG, POLY, 3X6, 2MIL	C	PPC99	CU	P 1 P C P	2
0003	228500-002 EA BUTTON, HARD SHELL, AQUA, DXS-65	#	NP	DC	P * P E P	1
0004	228619 EA FOOT, .25 DIA, RUBBER PAD	#	NP	DC	P * P E P	4
0005	225054 EA SCR, TF, TYP AB, 6X3/8, PNH, PH, S/BLKX	A	NP	CG	P * P E P	2
0006	228490 EA INSTR, INSTL, DXS-65	#	NP	CE	P * P E P	1
0007	228491 EA LABEL, PACKING BOX, DXS-65	#	NP	CE	P * P E P	1
0008	206898-006 EA BOX, PACKING, NO PRINT, ST SERIES	A	PPC99	CU	P 1 P E P	1
0009	206924 EA BOX, SHIPPING, 21.46 X 14.17 X 5.91	C	PPC99	CU	P 1 P E P	0.010000
0010	811666 EA LABEL, BAR, MSTR CTN, DXS-65	#	NP	CE	P * P E P	0.010000
0011	206926 EA BOX, SHIPPING, 22.28 X 15.0 X 14.17	C	PPC99	CU	P 1 P E P	0.005000
0012	911666 EA LABEL, BAR, SHPG CTN, DXS-65	#	NP	CE	P * P E P	0.005000
0013	208146 EA PAD, MSTR CTN, 535MM X 350MM	A	PPC99	CU	P 1 P E P	0.020000
0014	229010 EA TAPE, DBL SIDED, 2.50X.31X.06	#	NP	DC	P * P * P	2
0990	228483 EA F/G DXS-65	#	NP	DC	P * P E P	0
0991	228487 EA SPECS, DXS-65	#	NP	DC	P * P E P	0
0992	228489 EA TEST PROC, DXS-65	#	NP	DC	P * P E P	0
0993	711666 EA LABEL, UPC, SINGLE BOX, DXS-65	#	NP	CE	P * P E P	0

NOTES:

END OF REPORT

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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: 228484-01

ASSY, MECH, DXS-65

UM

ERC: #

SRCE CODE: P

TYPE: *

ABC

ITEM NO	COMPONENT PART NUMBER/ PART DESCRIPTION-REMARKS	ERC	PRODUCT CODE	COMM CODE	S T S A P C Y P B L	EXTENDED QTY PER
0001	228486-01 EA ASSY, PCB, DXS-65	#	NP	99	P * P E P	1
0002	228497 EA BACK, CHASSIS, DXS-65	#	NP	DC	P * P E P	1
0003	228499 EA SILICONE, KEYPAD, DXS-65	#	NP	DC	P * P E P	1
0004	228498 EA TOP, COVER, DXS-65	#	NP	DC	P * P E P	1
0005	228501 EA LIGHT PIPE, DXS-65	#	NP	DC	P * P E P	1
0006	228500-001 EA BUTTON, HARD SHELL, RED, DXS-65	#	NP	DC	P * P E P	1
0007	228496 EA BASE, MOUNT, DXS-65	#	NP	DC	P * P E P	1
0008	217425 EA LABEL, UL, MARK, DXS-62/63	B	PPCNP	CE	P * P E P	1
0009	228492 EA LABEL, FCC, DXS-65	#	NP	CE	P * P E P	1
0010	202761 EA LABEL, WARR/DATE CODE, 2 YEAR, BLK	C	PPC99	CE	X 1 P E P	1
0990	228484 EA ASSY, MECH, DXS-65	#	NP	DC	P * P E P	0
0991	228500 EA BUTTON, HARD SHELL, DXS-65	#	NP	DC	P * P E P	0

NOTES:

END OF REPORT

SECTION 9

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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: 228486-01

ASSY,PCB,DXS-65

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	228485 EA PCB,DXS-65	#	NP	DB	P * P E P	1
0002	228493-01 EA ASSY,UP,DXS-65,V1.0	#	NP	99	P * P E P	1
0003	213383-335 EA RES,CHIP,1/16W,3.3M,0603,5%	A	PPCNP	DQ	P 1 P E P	1
0004	213383-565 EA RES,CHIP,1/16W,5.6M,0603,5%	A	PPCNP	DQ	P 1 P E P	1
0005	213383-475 EA RES,CHIP,1/16W,4.7M,0603,5%	A	PPCNP	DQ	P 1 P E P	2
0006	213383-222 EA RES,CHIP,1/16W,2.2K,0603,5%	A	PPCNP	DQ	P 1 P E P	1
0007	213383-333 EA RES,CHIP,1/16W,33K,0603,5%	A	PPCNP	DQ	P 1 P E P	1
0008	213383-562 EA RES,CHIP,1/16W,5.6K,0603,5%	A	PPCNP	DQ	P 1 P E P	1
0009	213383-103 EA RES,CHIP,1/16W,10K,0603,5%	A	PPCNP	DQ	P 1 P E P	1
0010	213383-275 EA RES,CHIP,1/16W,2.7M,0603,5%	A	PPCNP	DQ	P 1 P E P	1
0011	213419 EA CAP,CER,C,16V104P,X7R,10%,0603	E	PPCNP	AO	P 1 P E P	2
0012	213391 EA CAP,CER,C,50V102P,X7R,10%,0603	C	PPCNP	AO	P 1 P E P	1
0013	219554 EA CAP,CER,C,50V5R6P,NPO,.25PF,0603	C	PPCNP	AO	P 1 P E P	1
0014	213390 EA CAP,CER,C,50V103P,X7R,10%,0603	C	PPCNP	AO	P 1 P E P	1
0015	203689-151 EA INDCTR,CER,150NH,1008CS,5%,SMD	D	PPC99	BR	P 1 P E P	2
0016	109295-103 EA INDCTR,CER,10UH,FERR,1008LS,10%,SMD	D	PPC99	BR	P 1 P E P	1
0017	205011-001 EA DIODE,MMBD914,SWITCH,SOT-23	E	PPC99	BF	P 1 P E P	2
0018	104553 EA XSTR,PNP,MMBT3906,SOT-23	D	PPC99	EN	P 1 P E P	1
0019	203687 EA XSTR,NPN,MMBTH10,SOT-23	B	PPC99	EN	P 1 P E P	1
0020	219134 EA XSTR,NPN,BFR92A,SOT-23	B	PPCNP	EN	P 1 P E P	1
0021	212828 EA RSONATR,315MHZ,RO,1 PORT,SAW,SM-2	C	PPC99	EV	P 1 P E P	1
0022	213507 EA REGLTR,3V,XC62FP3002,SOT-23	B	PPCNP	BS	P 1 P E P	1
0024	216377 EA CONTACT,BATTERY,2032	A	PPCNP	DC	P 1 P E P	2
0025	203583 EA BATT,3V,LITHIUM,2032,UL	D	RADMR1MSC	AH	P 1 P C P	2

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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: 228486-01

ASSY,PCB,DXS-65

UM

ERC: #

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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
0026	216378 EA ANTENNA,DXS-32	B	PPCNP E1	DC	P 1 P E P	1
0027	225067 EA LED,HPER-RED,160,DEG,1206	B	NP D3,4	CM	P * P E P	2
0028	213383-271 EA RES,CHIP,1/16W,270,0603,5%	A	PPCNP R4	DQ	P 1 P E P	1
0030	200691 EA LABEL,DATE CODE,PRODUCTION,.5"X.2"	B	PPC99	CE	X 1 S E P	1
0031	104354 FT WIRE,28,SLD,BARE,BULK,TIN/COPPER	C	PPC99	ES	X 1 S E P	0
0990	228486 EA ASSY,PCB,DXS-65	#	NP	DC	P * P E P	0
0991	228488 EA SCHEM,DXS-65	#	NP	DC	P * P E P	0
0992	228489 EA TEST PROC,DXS-65	#	NP	DC	P * P E P	0

NOTES:

END OF REPORT

