

## Introduction

Linear Technology Corporation (LTC) was founded in 1981 to address the growing demand for high performance and superior quality linear integrated circuits.

Today, LTC has successfully established a leadership position by introducing and supplying leading edge products in each of the industry's basic functional groups—op amps, comparators, voltage regulators, references, switched-capacitor filters, interface, data conversion, and a variety of special function CMOS devices, in all major package styles.

Early on, LTC made the commitment to provide advanced technology, *surface mount packaging*. This made Linear Technology the first company to offer true precision and high performance linear devices across the full range of functional categories, plus many of the popular second-source devices in JEDEC Standard packages:

SO (0.150) 8, 14, 16

SO (0.300) 16, 18, 20, 24, 28

SSOP (0.150) 16, 20, 24

SSOP (0.209) 16, 20, 24, 28

SSOP (0.300) 36, 44

TSSOP (0.173) 20

The continuing demand for more complete surface mount designs has spurred the introduction of two power surface mount packages by LTC—the 3-lead SOT-223 and the DD package available in 3-, 5- and 7-lead versions. Many LTC power products are now being introduced in these packages which, for the first time, enable high power designs to be realized using 100% surface mount devices. Support for LTC's surface mount devices includes service for tape and reel, antistatic rails, quality and reliability data, and data sheets on each product.

LTC intends to address customer demand for surface mount devices where technology and die sizes permit, making the combination of small package size and high performance linear devices readily available to our users.

This section contains information summarizing LTC's capabilities and services for surface mount packaged products, as well as specific device data sheets.

## Package Descriptions

LTC's SO packages conform to Standard JEDEC Small Outline drawings.

In some instances, an LTC product available in an 8-pin standard DIP package is offered in a 16-pin SO package. This covers the situation where the die is too large to be accommodated by the smaller SO-8 package. Although it is preferable for an SO-8 device to have the same pinout as the standard 8-pin dual-in-line version, some devices necessitate a rotation of the die to fit in the SO-8 package. Please refer to the applicable SO device data sheet, or consult with the factory to verify exact pinouts for each device.

## Electrical Specifications

Wherever possible, electrical specifications for a surface mount technology (SMT)\* device are the same as the plastic molded equivalent. Exceptions to this are identified by the omission of the standard product electrical grade designator from the part number.

For example:

- LT1013DS8 has the same electrical specifications as LT1013DN8, since the "D" is common to both product numbers.
- LT1012S8 has one or more different electrical specifications than LT1012CN8, as the "C" is missing from this product designator suffix.

Please consult the appropriate SMT package data sheet for complete electrical specifications.

\* Terminology: SO = Small Outline, SOT = Small Outline Transistor, SSOP = Shrink Small Outline Package, TSSOP = Thin Shrink Small Outline Package.

LTC package code designators for SMT products are:  
F = TSSOP, G = SSOP, GN = Narrow Body SSOP, GW = Wide Body SSOP, M, Q and R = DD Pak, S = Narrow Body SO, SW = Wide Body SO, ST = SOT-223.

## Marking

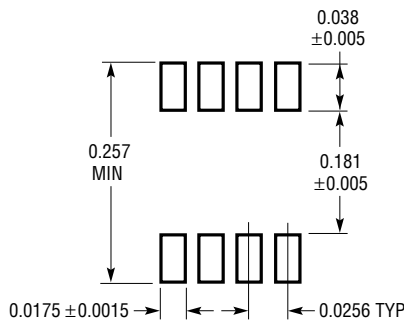
Because of the limited space available for part marking on some SMT packages, abbreviated marking codes are used to identify the device. These codes, if used, are identified in the individual SMT package data sheets.

## Lead Finish and Solderability

Lead finish is electroplated, lead-tin, with a low carbon content. Solderability meets the requirements of MIL-STD-883C, Method 2003. Recommended solder pads are given in Figure 1.

## Recommended Solder Pads

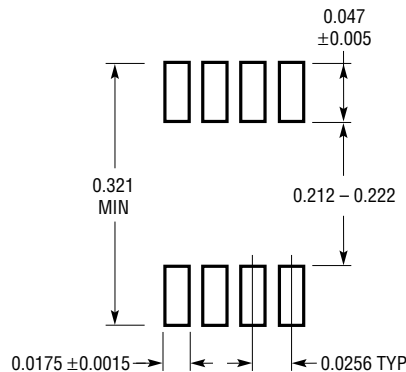
**F Package (0.173)**  
**TSSOP-20**



NOTE: ALL DIMENSIONS ARE IN INCHES

SMP 08

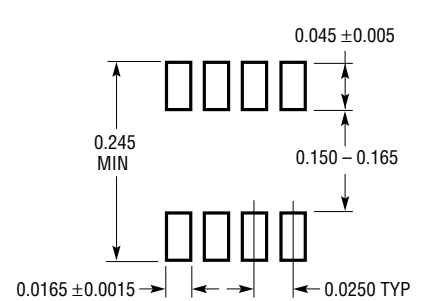
**G Package (0.209)**  
**SSOP-20, SSOP-24, SSOP-28**



NOTE: ALL DIMENSIONS ARE IN INCHES

SMP 07

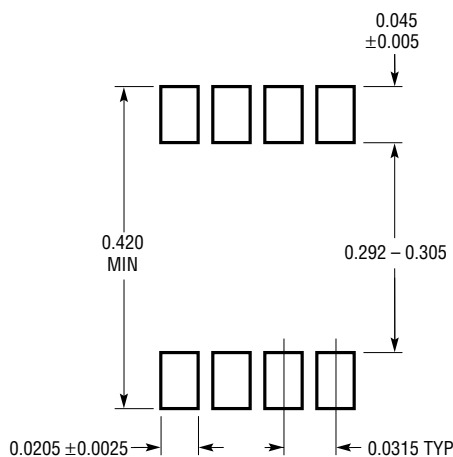
**GN Package Narrow (0.150)**  
**SSOP-16, SSOP-20, SSOP-24**



NOTE: ALL DIMENSIONS ARE IN INCHES

SMP 08A

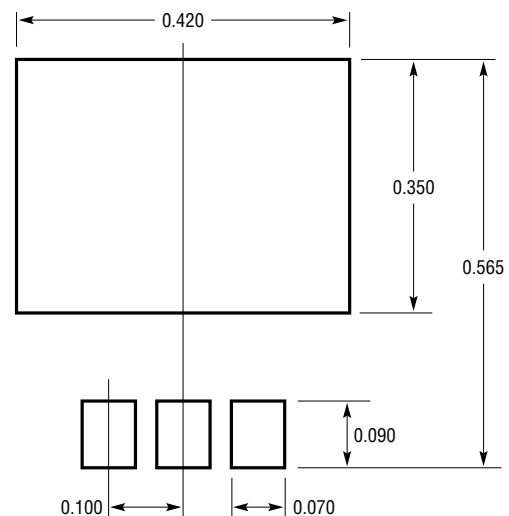
**GW Package Wide (0.300)**  
**SSOP-36, SSOP-44**



NOTE: ALL DIMENSIONS ARE IN INCHES

SMP 22

**M Package**  
**3-Lead DD**

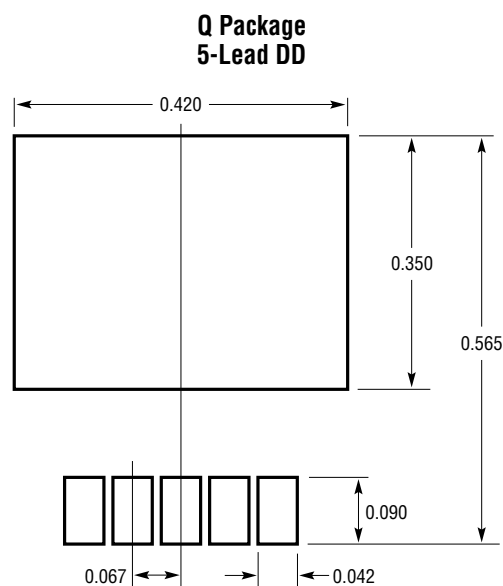


NOTE: ALL DIMENSIONS ARE IN INCHES

SMP 03

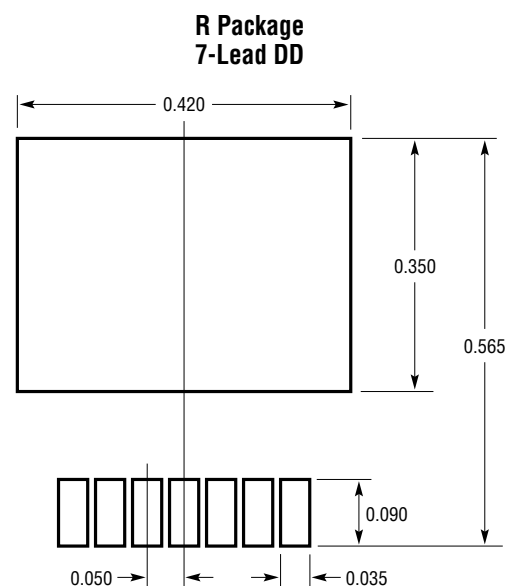
**Figure 1. Recommended Solder Pads**

# SURFACE MOUNT PRODUCTS



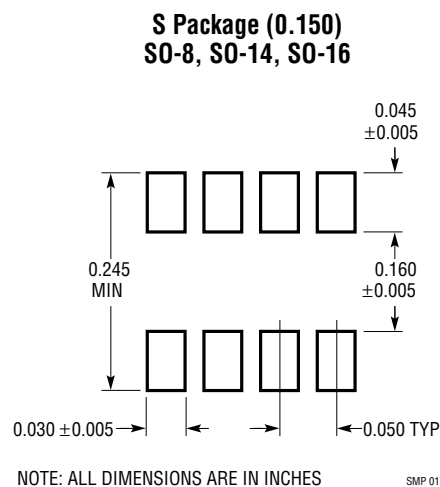
NOTE: ALL DIMENSIONS ARE IN INCHES

SMP 04



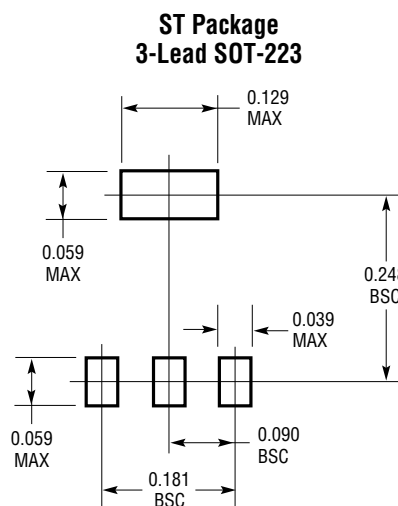
NOTE: ALL DIMENSIONS ARE IN INCHES

SMP 05



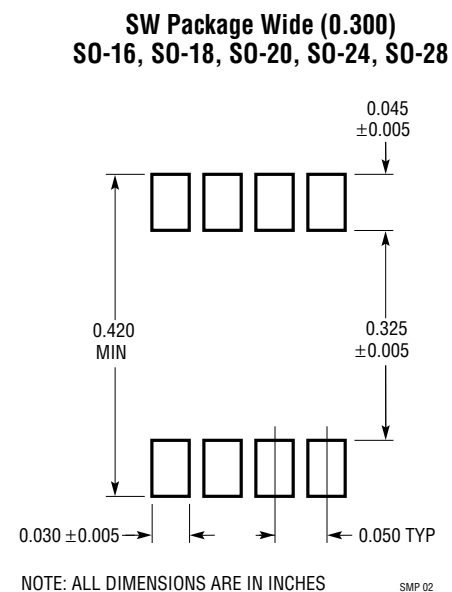
NOTE: ALL DIMENSIONS ARE IN INCHES

SMP 01



NOTE: ALL DIMENSIONS ARE IN INCHES

SMP 06



NOTE: ALL DIMENSIONS ARE IN INCHES

SMP 02

Figure 1. Recommended Solder Pads (Continued)

## Wave and Reflow Soldering

Following are the recommended procedures for soldering surface mount packages to PC boards.

### 1. Wave Soldering

- Use solder plating boards.
- Dispense adhesive to hold components on board.
- Place components on board.
- Cure adhesive per adhesive manufacturer's specification.
- Foam flux using RMA (Rosin Mildly Activating) flux.
- Wave solder using a dual wave soldering system at 240°C to 260°C for 2 seconds per wave.
- Clean board.

### 2. Reflow Soldering

- Use of solder plating boards is recommended.
- Screen solder paste on board.
- Mount components on board.
- Infrared or forced hot air convection reflow is recommended for best performance.
- Preheat peak temperature 125°C ± 15°C and 2°C to 5°C per second rise.
- Activation temperature 130°C to 150°C.
- Reflow begins at 183°C (63Sn/37Pb).
- Time above 183°C for at least 30 seconds.
- Peak package body temperature 220°C maximum.
- Cooling rate 2°C to 5°C per second.
- Clean boards.
- For Vapor Phase Reflow, recommended parameter ranges for:
  - Heating rate: 6°C per second maximum
  - Preheat temperature: 45°C to 80°C
  - Time above 200°C: 50 seconds to 90 seconds
  - Peak package temperature: 212°C to 219°C
- Hand soldering of DD and SOT-223 package is not recommended.

## Thermal Information

Table 1 shows the range of junction-to-ambient thermal resistance of SO devices mounted on a PCB of FR4

material with copper traces, in still air at 25°C.  $\theta_{JA}$  with a ceramic substrate is about 70% of the FR4 value. Maximum power dissipation may be calculated by the following formula:

$$P_{DMAX}(T_A) = \frac{T_{JMAX} - T_A}{\theta_{JA}}$$

where,

$T_{JMAX}$  = Maximum operating junction temperature.

$T_A$  = Desired ambient operating temperature.

$\theta_{JA}$  = Junction-to-ambient thermal resistance.

**Table 1. Typical Thermal Resistance Values**

SO-8	150°C/W to 200°C/W	SO-18	70°C/W to 100°C/W
SO-14	100°C/W to 140°C/W	SO-20	70°C/W to 90°C/W
SO-16 (0.150)	90°C/W to 130°C/W	SO-24	60°C/W to 80°C/W
SO-16 (0.300)	85°C/W to 100°C/W	SO-28	55°C/W to 75°C/W

Conditions: PCB mount on FR4 material, still air at 25°C, copper trace.

Thermal resistance for power packages (DD and SOT-223) depends greatly on the individual device type. Please consult the device data sheets for thermal information.

More current data, by device type, may be obtained by contacting LTC, Marketing Department.

## Tape and Reel Packing (See Tape and Reel Section)

### Plastic Tube Packing

LTC's Surface Mount products are packed in "antistatic" plastic tubes with the tube dimensions indicated in Figure 2. Unit quantities packaged per tube are listed below in Table 2.

**Table 2. Devices Per Tube**

LTC Package Code Designator	LTC Package Style	Actual Lead Count	Number of Units
F	TSSOP (0.173)	20	74
G	SSOP (0.209)	16	77
G	SSOP (0.209)	20	66
G	SSOP (0.209)	24	59
G	SSOP (0.209)	28	47
GN	SSOP (0.150)	16	100
GN	SSOP (0.150)	20, 24	55
GW	SSOP (0.300)	36	32
GW	SSOP (0.300)	44	27

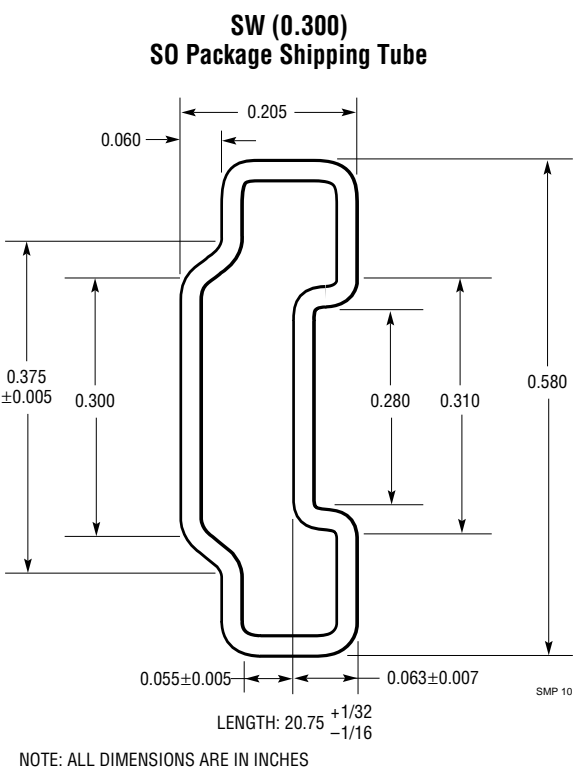
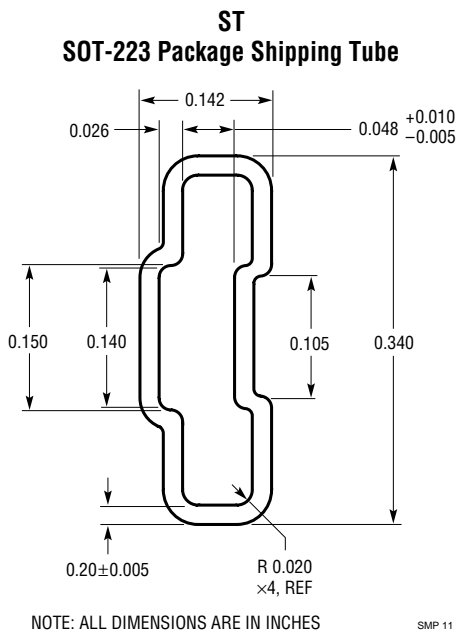
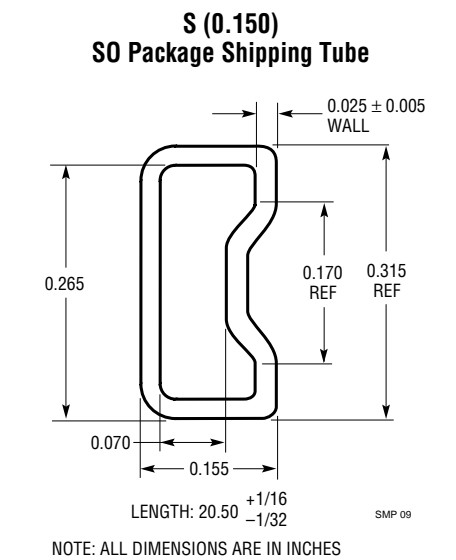
# SURFACE MOUNT PRODUCTS

Table 2. Devices Per Tube

LTC Package Code Designator	LTC Package Style	Actual Lead Count	Number of Units
M, Q, R	DD	3, 5, 7	50
S8	S8 (0.150)	8	100
S	S (0.150)	14	55
S	S (0.150)	16	50
ST	SOT-223	3	78

LTC Package Code Designator	LTC Package Style	Actual Lead Count	Number of Units
SW	SW (0.300)	16	47
SW	SW (0.300)	18	40
SW	SW (0.300)	20	38
SW	SW (0.300)	24	32
SW	SW (0.300)	28	27

## PLASTIC TUBE SPECIFICATIONS



- Note 1:** Tolerances:  $\pm 0.010$  unless otherwise specified.
- Note 2:** Material: antistatic treated rigid transparent PVC or rigid black conductive.
- Note 3:** Printing: "LTC logo, Linear Technology Corp., Antistatic" on topside of tube.

Figure 2

# SURFACE MOUNT PRODUCTS

## Surface Mount Small Outline (SO), DD and SOT Device Packaging

Linear Technology now offers a continually increasing number of high performance CMOS and bipolar linear devices in surface mount packages. Listed in the next several pages are device types now available in the DD power packages and the JEDEC standard outline packages; SO (Small Outline 0.150 and 0.300 body widths), SSOP (Shrink Small Outline 0.150, 0.209 and 0.300

body widths), TSSOP (Thin Shrink Small Outline 0.173 body width) and SOT-223 (Small Outline Transistor). For pinout configurations and electrical specification limits, consult either your LTC sales representative or the factory.

Surface Mount Packages: LTC Package Suffix:	DD M, Q, R	SO S8, S, SW	SOT-223 ST	SSOP G, GN, GW	TSSOP F
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PRODUCT	DESCRIPTION
<b>Operational Amplifiers</b>	
LF398 S8	Sample & Hold Amp
LM318 S8	Fast Op Amp
LT1001C S8	Precision Op Amp
LT1006 S8	Precision Single Supply Op Amp
LT1007C S8	Low Noise, High Speed, Precision Op Amp
LT1008 S8	Uncompensated, Picoamp Input, Precision Op Amp
LT1012 S8	Picoamp Input Current, Precision Op Amp, C-Load™
LT1013D S8	Dual Precision Single Supply Op Amp
LT1013I S8	Dual Precision Single Supply Op Amp
LT1014D SW	Quad Precision Single Supply Op Amp
LT1014I SW	Quad Precision Single Supply Op Amp
LT1028C S8	Ultra Low Noise Op Amp
LT1037C S8	Low Noise, High Speed Precision Op Amp
LTC1047C SW	Dual Micropower Zero-Drift Op Amp w/Internal Caps
LTC1049C S8	Low Power Zero-Drift Op Amp w/Internal Caps
LTC1050C S8	Zero-Drift Op Amp w/Internal Caps
LTC1051C SW	Dual Zero-Drift Op Amp w/Internal Caps
LTC1052C SW	Low Noise Zero-Drift Op Amp
LTC1053C SW	Quad Precision Zero-Drift Op Amp w/Internal Caps
LT1055 S8	JFET Input, High Speed, Precision Op Amp
LT1056 S8	JFET Input, High Speed, Precision Op Amp
LT1057 S8	Dual JFET Input, High Speed, Precision Op Amp
LT1057I S8	Dual JFET Input, High Speed, Precision Op Amp
LT1058 SW	Quad JFET Input, High Speed, Precision Op Amp
LT1058I SW	Quad JFET Input, High Speed, Precision Op Amp
LT1077 S8	Precision Micropower Op Amp
LT1078 S8	Dual Precision Micropower Op Amp
LT1078I S8	Dual Precision Micropower Op Amp
LT1079 SW	Quad Precision Micropower Op Amp
LT1079I SW	Quad Precision Micropower Op Amp
LT1097 S8	Low Cost, Low Power, Precision Op Amp
LT1112 S8	Dual Precision Op Amp, C-Load
LT1113C S8	Dual Low Noise, Precision, JFET Input Op Amp
LT1114 SW	Quad Precision Op Amp, C-Load
LT1115C SW	50MHz, 11V/μs, 1nV/√Hz Audio Op Amp
LT1122C S8	Fast Settling, JFET Input Op Amp
LT1122D S8	Fast Settling, JFET Input Op Amp
LT1124C S8	Dual Low Noise, High Speed, Precision Op Amp
LT1125C SW	Quad Low Noise, High Speed, Precision Op Amp
LT1126C S8	Decomp Dual Low Noise, High Speed, Precision Op Amp
LT1127C SW	Decomp Dual Low Noise, High Speed, Precision Op Amp
LT1128C S8	Unity-Gain Stable Ultra Low Noise Op Amp
LTC1150C S8	±15V Zero-Drift Op Amp w/Internal Caps
LTC1151C SW	Dual ±15V Zero-Drift Op Amp
LTC1152C S8	Rail-to-Rail Input/Output Zero-Drift Op Amp, C-Load
LTC1152I S8	Rail-to-Rail Input/Output Zero-Drift Op Amp
LT1178 S8	Dual Precision Micropower Op Amp
LT1179 SW	Quad Precision Micropower Op Amp
LT1187C S8	Low Power Video Difference Amp
LT1189C S8	Low Power Video Difference Amp
LT1190C S8	50MHz High Speed Video Op Amp
LT1191C S8	90MHz High Speed Video Op Amp
LT1192C S8	350MHz (A <sub>V</sub> ≥ 25) High Speed Video Op Amp
LT1193C S8	80MHz (Adj Gain) High Speed Video Op Amp
LT1194C S8	35MHz (A <sub>V</sub> = 10) Fixed Differential Video Op Amp
LT1195C S8	Low Power, High Speed Op Amp

PRODUCT	DESCRIPTION
LT1200C S8	Low Power, High Speed Op Amp, C-Load
LT1201C S8	Dual Low Power, High Speed Op Amp, C-Load
LT1202C S	Quad Low Power, High Speed Op Amp, C-Load
LT1206C S8, R	250mA, 60MHz Current Feedback Amplifier, C-Load
LT1208C S8	Dual Very High Speed Op Amp, C-Load
LT1209C S	Quad Very High Speed Op Amp, C-Load
LT1211C S8	14MHz Dual Precision Op Amp
LT1212C S	14MHz Quad Precision Op Amp
LT1213C S8	28MHz Dual Precision Op Amp
LT1214C S	28MHz Quad Precision Op Amp
LT1215C S8	23MHz Dual Precision Op Amp
LT1216C S	23MHz Quad Precision Op Amp
LT1217C S8	Low Power, 10MHz Current Feedback Amplifier
LT1220C S8	Very High Speed Op Amp
LT1221C S8	Very High Speed Op Amp (A <sub>V</sub> ≥ 4)
LT1222C S8	Very High Speed Op Amp (A <sub>V</sub> ≥ 10, Ext Comp)
LT1223C S8	100MHz Current Feedback Amplifier
LT1224C S8	45MHz Very High Speed Op Amp, C-Load
LT1225C S8	150MHz (A <sub>V</sub> ≥ 5) High Speed Op Amp
LT1226C S8	1GHz (A <sub>V</sub> ≥ 25) High Speed Op Amp
LT1227C S8	140MHz High Speed Current Feedback Op Amp
LT1228C S8	100MHz Current Feedback Amplifier w/DC Gain Control
LT1229C S8	Dual 100MHz Current Feedback Amplifier
LT1230C S	Quad 100MHz Current Feedback Amplifier
LTC1250C S8	Ultra Low Noise Zero-Drift Op Amp
LT1251C S	40MHz Video Fader/Amplifier
LT1252C S8	Low Cost Video Amplifier
LT1253C S8	Low Cost Dual Video Amplifier
LT1254C S	Low Cost Quad Video Amplifier
LT1256C S	40MHz DC Gain Controller Amplifier
LT1259C S	Dual 130MHz CFA with SHUTDOWN
LT1260C S	Triple 130MHz CFA with SHUTDOWN
LT1311C S	Quad 12MHz, 145ns Settling Precision Current-to-Voltage Converter for Optical Disk Drives
LT1354C S8	12MHz, 400V/μs Op Amp, C-Load
LT1355C S8	Dual 12MHz, 400V/μs Op Amp, C-Load
LT1356C S	Quad 12MHz, 400V/μs Op Amp, C-Load
LT1357C S8	25MHz, 600V/μs Op Amp, C-Load
LT1358C S8	Dual 25MHz, 600V/μs Op Amp, C-Load
LT1359C S	Quad 25MHz, 600V/μs Op Amp, C-Load
LT1360C S8	50MHz, 800V/μs Op Amp, C-Load
LT1361C S8	Dual 4mA, 50MHz, 800V/μs Op Amp, C-Load
LT1362C S	Quad 50MHz, 800V/μs Op Amp, C-Load
LT1363C S8	70MHz, 1000V/μs Op Amp, C-Load
LT1364C S8	Dual 6mA, 70MHz, 1000V/μs Op Amp, C-Load
LT1365C S	Quad 70MHz, 1000V/μs Op Amp, C-Load
LT1366C S8	Dual Rail-to-Rail Input/Output Op Amp
LT1367C S	Quad Rail-to-Rail Input/Output Op Amp
LT1368C S8	Dual Rail-to-Rail Input/Output Op Amp
LT1369C S	Quad Rail-to-Rail Input/Output Op Amp
LT1413 S8	Dual Single-Supply, Precision Op Amp
LT1457 S8	Dual Precision JFET Op Amp, C-Load
OP-07C S8	Precision Op Amp
OP-27G S8	Low Noise, High Speed, Precision Op Amp
OP-37G S8	Low Noise, High Speed, Precision Op Amp
OP-470G S	Quad Low Noise, Precision Op Amp

C-Load is a trademark of Linear Technology Corporation

# SURFACE MOUNT PRODUCTS

## Surface Mount Small Outline (SO), DD and SOT Device Packaging

PRODUCT		DESCRIPTION
<b>Battery Management/Charging</b>		
LT1239C	S	Backup Battery Management IC, Li-Ion or NiCd
LT1510C	S8	Battery Charger
LT1510C	S	Battery Charger
LT1512C	S8	SEPIC Battery Charger
LTC1325C	SW	μP-Controlled Battery Management System
<b>Instrumentation Amps</b>		
LTC1100AC	S8	Consult Factory
LTC1100C	SW	Chopper Stabilized Instrumentation Amp
LT1101	SW	Precision Micropower Instrumentation Amp
LT1101I	SW	Precision Micropower Instrumentation Amp
<b>Comparators</b>		
LT1011C	S8	Precision Volt Comparator
LT1016C	S8	High Speed Comparator
LT1016I	S8	High Speed Comparator
LT1017C	S8	Micropower Dual Comparator
LT1017I	S8	Micropower Dual Comparator
LT1018C	S8	Micropower Dual Comparator
LTC1040C	SW	Micropower Dual Sampling Comparator
LTC1041C	S8	Bang-Bang Controller
LT1116C	S8	High Speed, Ground-Sensing Comparator
LTC1443C	S	Quad Micropower Comparator and Reference
LTC1444C	S	Quad Micropower Comparator and Reference
LTC1445C	S	Quad Micropower Comparator and Reference
<b>Data Acquisition</b>		
LTC1090C	SW	10-Bit A/D with 8-Channel MUX & S/H
LTC1093C	SW	10-Bit A/D with 6-Channel MUX & S/H
LTC1096AC	S8	8-Bit Micropower A/D with S/H
LTC1096C	S8	8-Bit Micropower A/D with S/H
LTC1098AC	S8	8-Bit Micropower A/D with S/H
LTC1098C	S8	8-Bit Micropower A/D with S/H
LTC1099C	SW	8-Bit High Speed ADC with S/H
LTC1099I	SW	8-Bit High Speed ADC with S/H
LTC1196-1AC	S8	8-Bit, 600ns, 1MHz Sampling ADC
LTC1196-1BC	S8	8-Bit, 600ns, 1MHz Sampling ADC
LTC1196-2AC	S8	8-Bit, 710ns, 800kHz Sampling ADC
LTC1196-2BC	S8	8-Bit, 710ns, 800kHz Sampling ADC
LTC1198-1AC	S8	2-Channel, 8-Bit, 600ns, 750kHz, Sampling ADC
LTC1198-1BC	S8	2-Channel, 8-Bit, 600ns, 750kHz, Sampling ADC
LTC1198-2AC	S8	2-Channel, 8-Bit, 710ns, 750kHz, Sampling ADC
LTC1198-2BC	S8	2-Channel, 8-Bit, 710ns, 750kHz, Sampling ADC
LTC1257C	S8	12-Bit Complete V <sub>OUT</sub> DAC
LTC1257I	S8	12-Bit Complete V <sub>OUT</sub> DAC
LTC1272-3AC	SW	12-Bit 3μs Parallel I/O A/D with S/H
LTC1272-3BC	SW	12-Bit 3μs Parallel I/O A/D with S/H
LTC1272-3CC	SW	12-Bit 3μs Parallel I/O A/D with S/H
LTC1272-8AC	SW	12-Bit 8μs Parallel I/O A/D with S/H
LTC1272-8BC	SW	12-Bit 8μs Parallel I/O A/D with S/H
LTC1272-8CC	SW	12-Bit 8μs Parallel I/O A/D with S/H
LTC1273AC	SW	12-Bit 3μs Parallel I/O with S/H & Reference
LTC1273BC	SW	12-Bit 3μs Parallel I/O with S/H & Reference
LTC1274AI	SW	12-Bit 6μs Parallel I/O A/D with Reference and Shutdown
LTC1274C	SW	12-Bit 6μs Parallel I/O A/D with Reference and Shutdown
LTC1274I	SW	12-Bit 6μs Parallel I/O A/D with Reference and Shutdown
LTC1275AC	SW	12-Bit 3μs Parallel I/O with S/H & Reference
LTC1275BC	SW	12-Bit 3μs Parallel I/O with S/H & Reference
LTC1276AC	SW	12-Bit 3μs Parallel I/O with S/H & Reference
LTC1276BC	SW	12-Bit 3μs Parallel I/O with S/H & Reference
LTC1277AI	SW	12-Bit 6μs Parallel I/O with S/H & Reference
LTC1277C	SW	12-Bit 6μs Parallel I/O with S/H & Reference
LTC1277I	SW	12-Bit 6μs Parallel I/O with S/H & Reference
LTC1278-4C	SW	12-Bit 2.5μs High Speed Sampling A/D
LTC1278-4I	SW	12-Bit 2.5μs High Speed Sampling A/D
LTC1278-5C	SW	12-Bit 2.5μs High Speed Sampling A/D
LTC1278-5I	SW	12-Bit 2.5μs High Speed Sampling A/D

PRODUCT		DESCRIPTION
LTC1279C	SW	12-Bit 1.6μs Parallel I/O with S/H & Reference
LTC1279I	SW	12-Bit 1.6μs Parallel I/O with S/H & Reference
LTC1282AC	SW	12-Bit 6μs Parallel I/O with S/H & Reference
LTC1282BC	SW	12-Bit 6μs Parallel I/O with S/H & Reference
LTC1285C	S8	12-Bit 3V Micropower ADC with S/H
LTC1285I	S8	12-Bit 3V Micropower ADC with S/H
LTC1286C	S8	12-Bit Micropower A/D with S/H
LTC1286I	S8	12-Bit Micropower A/D with S/H
LTC1288C	S8	12-Bit 3V Micropower ADC with S/H
LTC1288I	S8	12-Bit 3V Micropower ADC with S/H
LTC1289BC	SW	12-Bit 3V 8-Channel MUX, S/H Full Duplex I/O
LTC1289CC	SW	12-Bit 3V 8-Channel MUX, S/H Full Duplex I/O
LTC1290BC	SW	12-Bit A/D with 8-Channel MUX & S/H
LTC1290BI	SW	12-Bit A/D with 8-Channel MUX & S/H
LTC1290CC	SW	12-Bit A/D with 8-Channel MUX & S/H
LTC1290CI	SW	12-Bit A/D with 8-Channel MUX & S/H
LTC1290DC	SW	12-Bit A/D with 8-Channel MUX & S/H
LTC1290DI	SW	12-Bit A/D with 8-Channel MUX & S/H
LTC1293BC	SW	12-Bit A/D with 6-Channel MUX & S/H
LTC1293CC	SW	12-Bit A/D with 6-Channel MUX & S/H
LTC1293DC	SW	12-Bit A/D with 6-Channel MUX & S/H
LTC1294BC	SW	12-Bit A/D with 8-Channel MUX & S/H
LTC1294BI	SW	12-Bit A/D with 8-Channel MUX & S/H
LTC1294CC	SW	12-Bit A/D with 8-Channel MUX & S/H
LTC1294DC	SW	12-Bit A/D with 8-Channel MUX & S/H
LTC1296BC	SW	12-Bit A/D with 8-Channel MUX & S/H, Single Supply
LTC1296BI	SW	12-Bit A/D with 8-Channel MUX & S/H, Single Supply
LTC1296CC	SW	12-Bit A/D with 8-Channel MUX & S/H, Single Supply
LTC1296CI	SW	12-Bit A/D with 8-Channel MUX & S/H, Single Supply
LTC1296DC	SW	12-Bit A/D with 8-Channel MUX & S/H, Single Supply
LTC1296DI	SW	12-Bit A/D with 8-Channel MUX & S/H, Single Supply
LTC1298C	S8	12-Bit Micropower A/D with S/H
LTC1298I	S8	12-Bit Micropower A/D with S/H
LTC1390C	S	8-Channel Serial I/O Analog MUX
LTC1392C	S8	10-Bit Environment Monitor ADC
LTC1392I	S8	10-Bit Environment Monitor ADC
LTC1400C	S8	Complete SO-8, 12-Bit 400ksp/s ADC with Shutdown
LTC1400I	S8	Complete SO-8, 12-Bit 400ksp/s ADC with Shutdown
LTC1410AC	SW	12-Bit 700ns Parallel I/O ADC with Reference and Shutdown
LTC1410BC	SW	12-Bit 700ns Parallel I/O ADC with Reference and Shutdown
LTC1410AI	SW	12-Bit 700ns Parallel I/O ADC with Reference and Shutdown
LTC1410BI	SW	12-Bit 700ns Parallel I/O ADC with Reference and Shutdown
LTC1410C	SW	12-Bit 700ns Parallel I/O ADC with Reference and Shutdown
LTC1410I	SW	12-Bit 700ns Parallel I/O ADC with Reference and Shutdown
LTC1451C	S8	12-Bit Complete V <sub>OUT</sub> DAC
LTC1451I	S8	12-Bit Complete V <sub>OUT</sub> DAC
LTC1452C	S8	12-Bit V <sub>OUT</sub> Multiplying Rail-to-Rail DAC
LTC1452I	S8	12-Bit V <sub>OUT</sub> Multiplying Rail-to-Rail DAC
LTC1453C	S8	12-Bit Complete V <sub>OUT</sub> DAC 3V/5V Operation
LTC1453I	S8	12-Bit Complete V <sub>OUT</sub> DAC 3V/5V Operation
LTC1522C	S	4-Channel 3V Micropower Sampling 12-Bit Serial I/O ADC
LTC7541AJ	S	Improved Industry Std CMOS 12-Bit Multiplying DAC
LTC7541AK	SW	Improved Industry Std CMOS 12-Bit Multiplying DAC
LTC7543GK	SW	Improved Industry Std Serial 12-Bit Multiplying DAC
LTC7543K	SW	Improved Industry Std Serial 12-Bit Multiplying DAC
LTC8043E	S8	Serial 12-Bit Multiplying DAC in SO-8
LTC8043F	S8	Serial 12-Bit Multiplying DAC in SO-8
LTC8143E	SW	Improved Industry Std Serial 12-Bit Multiplying DAC
LTC8143F	SW	Improved Industry Std Serial 12-Bit Multiplying DAC

# SURFACE MOUNT PRODUCTS

## Surface Mount Small Outline (SO), DD and SOT Device Packaging

PRODUCT	DESCRIPTION
<b>Regulators, PWMs, DC/DC Converters</b>	
LT1020C SW	µPower Low Dropout Regulator with Comparator
LT1020I SW	µPower Low Dropout Regulator with Comparator
LT1072C S8	40kHz 1.25A Switching Regulator
LT1073C S8	µPower Switching Regulator Works Down to 1V Input, Adjustable & Fixed 5V, 12V Outputs
LT1076C Q	2A Step-Down Switching Regulator
LT1076C Q	2A Step-Down Switching Regulator, +5V Output
LT1076C R	2A Step-Down Switching Regulator with Shutdown, 5-Lead DD Package, Adjustable Output
LT1076C R-5	2A Step-Down Switching Regulator with Shutdown, 7-Lead DD Package, 5V
LT1076HVC R	2A Step-Down Switching Regulator, 7-Lead DD Pkg
LT1084C M	5A Low Dropout Regulator, 3-Lead DD Package
LT1085C M	Adjustable Low Dropout Pos Voltage Regulator, 3A
LT1085C M-3.3	3.3V Low Dropout Voltage Regulator, 3A
LT1085C M-3.6	3.6V Low Dropout Voltage Regulator, 3A
LT1086C M	1.5A Low Dropout Regulator, 3-Lead DD Pkg
LT1086C M-3.3	3.3V Low Dropout Positive Voltage Regulator, 1.5A
LT1086C M-3.6	3.6V Low Dropout Positive Voltage Regulator, 1.5A
LT1107C S8	µPower DC/DC Converter Works Down to 2V Input, Adjustable & Fixed 5V, 12V Outputs
LT1108C S8, S8-5, S8-12	µPower DC/DC Converter Works Down to 2V Input, Adjustable & Fixed 5V, 12V Outputs
LT1109AC S8	µPower DC/DC Converter with Shutdown & 100kHz Switching Frequency, Adjustable & Fixed 5V, 12V Outputs
LT1109AC S8-5	µPower Switching Regulator, 5V Output
LT1109AC S8-12	µPower Switching Regulator, 12V Output
LT1109C S8, S8-5, S8-12	µPower DC/DC Converter with Shutdown & 100kHz Switching Frequency, Adjustable & Fixed 5V, 12V Outputs
LT1110C S8, S8-5, S8-12	µPower DC/DC Converter Works Down to 1V Input, Adjustable & Fixed 5V, 12V Outputs
LT1111C S8, S8-5, S8-12	µPower Switching Regulator Works Down to 2V Input, Adjustable & Fixed 5V, 12V Outputs
LT1111I S8	µPower Adjustable Switching Regulator
LT1117C M	Adjustable Low Dropout Regulator
LT1117C M-3.3	3.3V Low Dropout Regulator
LT1117C M-5	5V Low Dropout Regulator
LT1117C ST	Low Dropout 800mA Adjustable Regulator
LT1117C ST-5	Low Dropout 800mA Regulator, 5V
LT1117C ST-2.85	Active SCSI-2 Terminator, 2.85V
LT1117C ST-3.3	Low Dropout 800mA Fixed 3.3V Regulator
LT1118C S8-2.5	2.5V Source/Sink Low Dropout Regulator
LT1118C S8-2.85	SCSI Source/Sink Terminator
LT1118C S8-5	5V Source/Sink Low Dropout Regulator
LT1118C ST-2.5	2.5V Source/Sink Low Dropout Regulator
LT1118C ST-2.85	SCSI Source/Sink Terminator
LT1118C ST-5	5V Source/Sink Low Dropout Regulator
LT1120AC S8	µPower Voltage Regulator and Comparator with Shutdown
LT1120C S8	µPower Low Dropout Regulator with Shutdown
LT1121AC S8, S8-3.3, 5	µPower Low Dropout Regulator with Shutdown, Adjustable & Fixed 3.3V, 5V Outputs
LT1121AI S8	Adjustable Low Dropout µP Regulator
LT1121AI S8-3.3	3.3V Low Dropout µPower Regulator
LT1121AI S8-5	5V Low Dropout µPower Regulator
LT1121C S8, S8-3.3, 5	µPower Low Dropout Regulator with Shutdown, Adjustable & Fixed 3.3V, 5V Outputs
LT1121C ST-3.3, 5	µPower Low Dropout Regulator, Fixed 3.3V, 5V Output
LT1121I S8	Adjustable Low Dropout µPower Regulator
LT1121I S8-3.3	3.3V Low Dropout µPower Regulator
LT1121I S8-5	5V Low Dropout µPower Regulator
LT1121I ST-3.3	3.3V Low Dropout µPower Regulator
LT1121I ST-5	5V Low Dropout µPower Regulator
LT1123C ST	Low Dropout Regulator Driver
LT1129C Q, Q-3.3	700mA µPower Low Dropout Voltage Regulator
LT1129C Q-5	µPower Low Dropout Regulator, Fixed 5V Output
LT1129C S8	Adjustable 700mA µPower Low Dropout Regulator
LT1129C S8-3.3	3.3V 700mA µPower Low Dropout Regulator

PRODUCT	DESCRIPTION
LT1129C S8-5	5V 700mA µPower Low Dropout Regulator
LT1129C ST-3.3	700mA µPower Low Dropout Regulator
LT1129C ST-5	µPower Low Dropout Regulator, Fixed 5V Output
LT1129I Q, Q-3.3, Q-5	700mA µPower Low Dropout Voltage Regulator
LT1129I S8	Adjustable 700mA µPower Low Dropout Regulator
LT1129I S8-3.3, 5	3.3V and 5V 700mA µPower Low Dropout Regulator
LT1129I ST-3.3, 5	700mA µPower Low Dropout Regulator, 3.3V and 5V Fixed
LTC1142C G	Dual High Efficiency Switching Regulator Controller
LTC1142HVC G	HV Dual High Efficiency Switching Regulator Controller
LTC1142HVC G-ADJ	Adjustable HV Dual High Efficiency Sw. Reg. Controller
LTC1143C SW	Dual High Efficiency Switching Regulator Controller
LTC1144C S8	20V Switched Capacitor Voltage Converter
LTC1144I S8	20V Switched Capacitor Voltage Converter
LTC1147C S8-3.3, 5	High Efficiency Step-Down Switching Regulator Controller
LTC1147LC S8, S8-3.3	High Efficiency Step-Down Switching Regulator Controller
LTC1148C S, S-3.3, 5	High Efficiency Step-Down Synchronous Switching Regulator Controller
LTC1148HVC S, S-3.3, 5	High Efficiency Step-Down Synchronous Switching Regulator Controller
LTC1148LC S, S-3.3	High Efficiency Step-Down Synchronous Switching Regulator Controller
LTC1149C S, S-3.3, 5	High Efficiency Step-Down Synchronous Switching Regulator Controller, 48V Inputs
LTC1159C S, S-3.3, 5	High Efficiency Step-Down Synchronous Switching Regulator Controller
LTC1159C G, G-3.3, 5	High Efficiency Step-Down Synchronous Switching Regulator Controller
LT1170C Q	100kHz 5A Switching Regulator, 5-Lead DD Pkg
LT1171C Q	100kHz 2.5A Switching Regulator, 5-Lead DD Pkg
LT1172C SW	100kHz 1.25A Switching Regulator
LT1172C S8	1.25A High Efficiency 100kHz Switching Regulator
LT1172C Q	100kHz 1.25A Switching Regulator, 5-Lead DD Pkg
LT1172I S8	100kHz 1.25A Power Switching Regulator
LT1173C S8	µPower Switching Regulator for Inputs Greater than 2V, Adjustable & Fixed 5V, 12V Versions
LTC1174C S8, S8-3.3, 5	High Efficiency, 400mA Step-Down Switching Regulator
LTC1174HVC S8	HV Adjustable µPower Step-Down DC/DC Converter
LTC1174HVC S8-3.3	HV 3.3V µPower Step-Down DC/DC Converter
LTC1174HVC S8-5	HV 5V µPower Step-Down DC/DC Converter
LTC1174I S8	Adjustable µPower Step-Down DC/DC Converter
LT1175C S8-5	–5V Micropower Low Dropout Regulator
LT1175C S8-ADJ	Negative Adjustable Low Dropout Regulator
LT1176C SW	100kHz 1A Step-Down Switching Regulator with Shutdown
LT1176C SW-5	5V 1A Step-Down Switching Regulator
LT1182C S	LCD/CCFL Dual Switching Regulator
LT1183C S	LTC/CCFL Dual Switching Regulator
LT1184C S	CCFL Switching Regulator for Grounded Bulbs
LT1184FC S	CCFL Switching Regulator for Floating or Grounded Bulbs
LT1186C S	CCFL Switching Regulator w/Digital Brightness Control
LT1241C S8	Current Mode PWM Controller
LT1241I S8	Current Mode PWM Controller
LT1242C S8	Current Mode PWM Controller
LT1242I S8	Current Mode PWM Controller
LT1243C S8	Current Mode PWM Controller
LT1243I S8	Current Mode PWM Controller
LT1244C S8	Current Mode PWM Controller
LT1244I S8	Current Mode PWM Controller
LT1245C S8	Current Mode PWM Controller
LT1245I S8	Current Mode PWM Controller
LT1246C S8	1MHz Current Mode PWM Controller
LT1247C S8	1MHz Current Mode PWM Controller
LT1248C S	Power Factor Correction Contoller
LT1248I S	Power Factor Correction Contoller
LT1249C S8	8-Pin Power Factor Correction Controller
LT1249I S8	8-Pin Power Factor Correction Controller



# SURFACE MOUNT PRODUCTS

## Surface Mount Small Outline (SO), DD and SOT Device Packaging

PRODUCT	DESCRIPTION
LTC1262C S8	12V, 30mA VPP Generator
LTC1265C S, S-3.3, 5	1.2A High Efficiency Step-Down DC/DC Converter in Adjustable, Fixed 3.3V and 5V Output
LTC1266C S, S-3.3, 5	High Efficiency Synchronous Switching Regulator Controller in Adjustable, Fixed 3.3V and 5V Output
LTC1267C G, G-ADJ, G-ADJ5	Dual High Voltage High Efficiency Synchronous Switching Regulator Controller
LT1268BC Q	7.5A, 150kHz Switching Regulator
LT1268C Q	7.5A, 150kHz Switching Regulator, 5-Lead Package
LT1269C Q	4A, Power Switching Regulator, 5-Lead DD Package
LT1269C SW	100kHz 4A Switching Regulator, 20-Lead SOIC
LT1271C Q	60kHz 4A Switching Regulator, 5-Lead DD Package
LT1300C S8	μPower Step-Up DC/DC Converter, 1.8V Input
LT1301C S8	μPower Step-Up DC/DC Converter, 1.8V Input
LT1301I S8	5V/12V μPower DC/DC Boost Converter
LT1302C S8	μPower High Current Step-Up DC/DC Converter
LT1302C S8-5	μPower High Current Step-Up Fixed 5V Output DC/DC Converter
LT1303C S8	5V/12V μPower DC/DC Boost Converter with LBD
LT1303C S8-5	5V μPower DC/DC Boost Converter with LBD
LT1304C S8, S8-3.3, 5	Micropower DC/DC Converter with Low-Battery Detector Active in Shutdown
LT1305C S8	Micropower High Current DC/DC Converter
LT1309C S8	500kHz Micropower DC/DC Converter
LT1371C R	3A/500kHz High Efficiency Switching Regulator
LT1371C SW	3A/500kHz High Efficiency Switching Regulator
LT1372C S8	1.5A/500kHz Step-Up Switching Regulator
LT1373C S8	1.5A/250kHz Step-Up Switching Regulator
LT1375C S8, S8-5	1.5A/500kHz Step-Down Switching Regulator in Adjustable and Fixed 5V Outputs
LT1375I S8, S8-5	1.5A/500kHz Step-Down Switching Regulator in Adjustable and Fixed 5V Outputs
LT1376C S8, S8-5	1.5A/500kHz Step-Down Switching Regulator in Adjustable and Fixed 5V Outputs
LT1376I S8, S8-5	1.5A/500kHz Step-Down Switching Regulator in Adjustable and Fixed 5V Outputs
LT1377C S8	1.5A/1MHz Step-Up Switching Regulator
LTC1430C S, S8	High Power Step-Down Switching Regulator
LT1432C S8	High Efficiency Switching Regulator Controller
LT1432C S8-3.3	High Efficiency 3.3V Controller
LT1521C S8	300mA μPower Low Dropout Adjustable Voltage Regulator
LT1521C S8-3.0	300mA μPower Low Dropout 3V Voltage Regulator
LT1521C S8-3.3	300mA μPower Low Dropout 3.3V Voltage Regulator
LT1521C S8-5	300mA μPower Low Dropout 5V Voltage Regulator
LT1521C ST-3.0	300mA μPower Low Dropout 3V Voltage Regulator
LT1521C ST-3.3	300mA μPower Low Dropout 3.3V Voltage Regulator
LT1521C ST-5	300mA μPower Low Dropout 5V Voltage Regulator
LT1521I S8	300mA μPower Low Dropout Adj Voltage Regulator
LT1521I S8-3.0	300mA μPower Low Dropout 3V Voltage Regulator
LT1521I S8-3.3	300mA μPower Low Dropout 3.3V Voltage Regulator
LT1521I S8-5	300mA μPower Low Dropout 5V Voltage Regulator
LT1521I ST-3.0	300mA μPower Low Dropout 3V Voltage Regulator
LT1521I ST-3.3	300mA μPower Low Dropout 3.3V Voltage Regulator
LT1521I ST-5	300mA μPower Low Dropout 5V Voltage Regulator
LT1572C S	1.5A Switching Regulator w/Built-In Schottky Rectifier
LTC1574C S, S-3.3, S-5	High Efficiency Step-Down Switching Regulator with Internal Schottky Rectifier
LT1585C M	4A and 4.6A Low Dropout Regulator, 3-Lead DD Package, Fixed Output
LT1585C M-3.3, M-3.38, M-3.45, M-3.6	3.3V, 3.38V, 3.45V, 3.6V and Adjustable Outputs
LT1587C M, M-3.3, M-3.45, M-3.6	3A Low Dropout Regulator, 3-Lead DD Package, Fixed and Adjustable Output Voltage
SG3524 S	Pulse Width Modulator

PRODUCT	DESCRIPTION
<b>Switched-Capacitor Voltage Converters</b>	
LTC660C S8	High Current Switched-Capacitor Voltage Converter
LT1026C S8	5V to ±10V Switched-Capacitor Voltage Converter
LTC1043C SW	Dual Precision Instrumentation Switched Capacitor Building Block
LTC1044AC S8	Switched-Capacitor Voltage Converter, 13V
LTC1044C S8	Switched-Capacitor Voltage Converter
LTC1044AI S8	Switched-Capacitor Voltage Converter, 13V
LTC1046C S8	50mA Switched-Capacitor Voltage Converter
LTC1046I S8	50mA Switched-Capacitor Voltage Converter
LT1054C S8, SW	100mA Switched-Capacitor Voltage Converter
LT1054I SW	100mA Switched-Capacitor Voltage Converter
LTC1144C S8	20V Switched-Capacitor Voltage Converter
LTC1144I S8	20V Switched-Capacitor Voltage Converter
LTC1261C S, S8, S8-4, S8-4.5	Switched-Capacitor Voltage Inverter for GaAs FET Bias
LTC1429C S, S8-4	(+)-to-(−) Converter w/Regulation, External Clock
LTC1550C G, G-4.1, G8-4.1	Low Noise, (+)-to-(−) Switched-Capacitor Converter
LTC1550C S, S8-4.1	Low Noise, (+)-to-(−) Switched-Capacitor Converter
LTC1551C G-4.1, G8-4.1, S-4.1, S8-4.1	Low Noise, (+)-to-(−) Switched-Capacitor Converter
<b>Switched-Capacitor Filters</b>	
LTC1059C S	2nd Order Universal Filter
LTC1060C SW	Dual 2nd Order Universal Filter
LTC1061C SW	Triple 2nd Order Universal Filter
LTC1062C SW	5th Order Lowpass Filter (Patented)
LTC1063C SW	Low Offset Clock-Tunable Lowpass Filter
LTC1064C SW	100kHz Quad 2nd Order Universal Filter
LTC1064-1C SW	8th Order Cauer Lowpass Filter
LTC1064-2C SW	8th Order Butterworth Lowpass Filter
LTC1064-3C SW	8th Order Bessel (Linear Phase) Lowpass Filter
LTC1064-4C SW	8th Order Cauer/Transitional Lowpass Filter
LTC1064-7C SW	100kHz Phase Corrected Lowpass Filter
LTC1064-XXC SW	High Speed, Low Noise Quad Semi-Custom Filter
LTC1065C SW	Low Offset Clock-Tunable Lowpass Filter
LTC1065I SW	Low Offset Clock Sweep. Bessel Filter
LTC1066-1C SW	14-Bit Accurate, 8th Order, LP Filter
LTC1164C SW	Low Power Quad 2nd Order Universal Filter
LTC1164AC SW	Quad 20kHz Low Power
LTC1164-5C SW	Low Power, 8th Order, Butterworth Filter
LTC1164-6C SW	Low Power, 8th Order, Cauer Filter
LTC1164-7C SW	Low Power, 8th Order, Linear Phase Filter
LTC1164-8 SW	Ultra-Selective Elliptic Bandpass Filter w/Adjustable Gain
LTC1164-XXC SW	Low Power, Low Noise Quad Semi-Custom Filter
LTC1264C SW	High Speed, Quad 2nd Order Universal Filter
LTC1264-7C SW	High Speed, 8th Order, Linear Phase Filter
<b>References</b>	
LM334 S8	Constant Current Source & Temperature Sensor Reference
LM385 S8-1.2	1.2V Bandgap Voltage Reference
LM385 S8-2.5	2.5V Bandgap Voltage Reference
LM385B S8-1.2	1.2V Bandgap Voltage Reference
LM385B S8-2.5	2.5V Bandgap Voltage Reference
LT1004C S8-1.2	1.2V Bandgap Voltage Reference
LT1004C S8-2.5	2.5V Bandgap Voltage Reference
LT1004I S8-1.2	1.2V Bandgap Voltage Reference
LT1004I S8-2.5	2.5V Bandgap Voltage Reference
LT1009 S8	2.5V Reference
LT1009I S8	2.5V Reference
LT1019C S8-2.5	2.5V Precision Reference
LT1019C S8-4.5	4.5V Precision Reference
LT1019C S8-5	5V Precision Reference
LT1019C S8-10	10V Precision Reference

# SURFACE MOUNT PRODUCTS

## Surface Mount Small Outline (SO), DD and SOT Device Packaging

PRODUCT	DESCRIPTION
LT1021DC S8-5	5V Precision Reference
LT1021DC S8-7	7V Precision Reference
LT1021DC S8-10	10V Precision Reference
LT1027DC S8-5	5V 5.0ppm Buried Zener Precision Reference
LT1027EC S8-5	5V 7.5ppm Buried Zener Precision Reference
LT1034C S8-1.2	Micropower Dual Reference: 1.2V, 7V
LT1034C S8-2.5	Micropower Dual Reference: 2.5V, 7V
LT1034I S8-2.5	2.5V Reference, 40ppm/°C Max TC
LT1236AC S8-5	5V Precision Reference
LT1236AC S8-10	10V Precision Reference
LT1236AI S8-10	10V Precision Reference
LT1236BC S8-5	5V Precision Reference
LT1236BC S8-10	10V Precision Reference
LT1236BI S8-5	5V Precision Reference
LT1236BI S8-10	10V Precision Reference
LT1236CC S8-5	5V Precision Reference
LT1236CC S8-10	10V Precision Reference
LT1236CI S8-5	5V Precision Reference
LT1236CI S8-10	10V Precision Reference
LT1431C S8	Programmable Reference
LT1431I S8	Programmable Reference
<b>Interface Circuits</b>	
LTC485C S8	Ultralow Power RS485 Transceiver
LTC485I S8	Ultralow Power RS485 Transceiver
LTC486C SW	Ultralow Power RS485 Interface Device
LTC486I SW	Ultralow Power RS485 Interface Device
LTC487C SW	Ultralow Power RS485 Interface Device
LTC487I SW	Ultralow Power RS485 Interface Device
LTC488C SW	Ultralow Power RS485 Quad Receiver
LTC488I SW	Ultralow Power RS485 Quad Receiver
LTC489C SW	Ultralow Power RS485 Quad Receiver
LTC489I SW	Ultralow Power RS485 Quad Receiver
LTC490C S8	Ultralow Power RS485 Full-Duplex Transceiver
LTC490I S8	Ultralow Power RS485 Full-Duplex Transceiver
LTC491C S	Ultralow Power RS485 Full-Duplex Transceiver
LTC491I S	Ultralow Power RS485 Full-Duplex Transceiver
LT1030C SW	Quad Low Power Line Driver
LT1032C SW	Quad Low Power Line Driver with Response Time Control
LT1039C SW16	3-DX/3-RX RS232 Transceiver with Shutdown
LT1039I SW16	3-DX/3-RX RS232 Transceiver with Shutdown
LT1039C SW18	3-DX/3-RX RS232 Transceiver
LT1080C SW	Dual RS232 Transceiver with 5V to ±9V Pump & Shutdown
LT1080I SW	Dual RS232 Transceiver with 5V to ±9V Pump
LT1081C SW	Dual RS232 Transceiver with 5V to ±9V Pump & Shutdown
LT1081I SW	Dual RS232 Transceiver with 5V to ±9V Pump
LT1130AC SW	5-DX/5-RX RS232 Transceiver with 5V to ±9V Pump
LT1131AC SW	5-DX/4-RX RS232 Transceiver with 5V to ±9V Pump & Shutdown
LT1132AC SW	5-DX/3-RX RS232 Transceiver with 5V to ±9V Pump
LT1133AC SW	3-DX/5-RX RS232 Transceiver with 5V to ±9V Pump
LT1134AC SW	4-DX/4-RX RS232 Transceiver with 5V to ±9V Pump
LT1134AI SW	4-DX/4-RX 5V RS232 Transceiver
LT1135AC SW	5-DX/3-RX RS232 Transceiver
LT1136AC SW	4-DX/5-RX RS232 Transceiver with 5V to ±9V Pump & Shutdown
LT1137AC G, SW	3-DX/5-RX RS232 Transceiver with 5V to ±9V Pump & Shutdown & ±10kV ESD
LT1137AI SW	3-DX/5-RX RS232 Transceiver with 5V and Shutdown
LT1138AC G, SW	5-DX/3-RX RS232 Transceiver with 5V to ±9V Pump & Shutdown
LT1139AC SW	4-DX/4-RX RS232 Transceiver, 5V/12V Powered with Shutdown

PRODUCT	DESCRIPTION
LT1140AC SW	5-DX/3-RX RS232 Transceiver with Shutdown
LT1141AC SW	3-DX/5-RX RS232 Transceiver with Shutdown
LT1180AC SW	±10kV, 5V RS232 DX/RX with Shutdown, 0.1μF
LT1180AI SW	Dual RS232 Transceiver with 5V to ±9V Pump & Shutdown
LT1181AC SW	Dual RS232 Transceiver with 5V to ±9V Pump
LT1237C G, SW	3-DX/5-RX RS232 Transceiver with 5V to ±9V Pump, Single RX Keep-Alive & Shutdown
LT1280AC SW	Dual RS232 Transceiver with 5V to ±9V Pump & Shutdown
LT1281AC SW	Dual RS232 Transceiver with 5V to ±9V Pump
LT1281I SW	Low Power Dual RS232 Transceiver with 5V to ±9V Pump
LTC1318C SW	Single 5V AppleTalk® DCE Transceiver
LT1319C S	Infrared Receiver, Dual Channel
LTC1320C S	AppleTalk Transceiver
LTC1321C S	Programmable EIA/TIA562/RS232 and RS485 Transceiver
LTC1321I S	Programmable EIA/TIA562/RS232 and RS485 Transceiver
LTC1322C S	Programmable EIA/TIA562/RS232 and RS485 Transceiver
LTC1322I S	Programmable EIA/TIA562/RS232 and RS485 Transceiver
LTC1323C G, SW	Single 5V AppleTalk Transceiver
LTC1324C SW	5V Powered Apple/LocalTalk® Transceiver
LTC1327C G, SW	3V Low Power EIA562 3-DX/5-RX Transceiver
LT1330C G, S	5V RS232 Transceiver with 3V Logic Interface and 1 RX Active in Shutdown
LT1331C G, SW	3-DX/5-RX RS232 Transceiver with 3V-Only Supply
LT1332C G, SW	3-DX/5-RX RS232 Transceiver with Low Power
LTC1334C SW	5V Powered Programmable EIA/TIA232/485 Transceiver
LTC1334I SW	5V Powered Programmable EIA/TIA232/485 Transceiver
LTC1335C SW	Programmable EIA/TIA562 and RS485 Transceiver
LTC1335I SW	Programmable EIA/TIA562 and RS485 Transceiver
LTC1337C G, SW	3-DX/5-RX RS232 Transceiver with μPower
LTC1338C G, SW	5V Low Power RS232 Transceiver with μPower
LTC1338I G, SW	5V Low Power RS232 Transceiver with μPower
LT1341C G, SW	3-DX/5-RX RS232 Transceiver with Shutdown and DX Disable
LT1342C G, SW	3-DX/5-RX RS232 Transceiver with 3V & 5V Logic Supplies
LTC1345C SW	Single Supply V.25 Transceiver
LTC1345I SW	Single Supply V.35 Transceiver
LTC1346C SW	±5V powered V.35 Transceiver
LTC1346I SW	±5V powered V.35 Transceiver
LTC1347C G, SW	5V Low Power RS232 3-DX/5-RX Transceiver with 5 RX Active in Shutdown
LTC1348C G, SW	3.3V Low Power RS232 3-DX/5-RX Transceiver
LTC1349C G, SW	5V Low Power RS232 3-DX/5-RX Transceiver with 2 RX Active in Shutdown
LTC1349I G, SW	5V Low Power RS232 3-DX/5-RX Transceiver with 2 RX Active in Shutdown
LTC1350C G, SW	3.3V Low Power EIA/TIA562 3-DX/5-RX Transceiver
LTC1350I G, SW	3.3V Low Power EIA/TIA562 3-DX/5-RX Transceiver
LT1381C S	Dual RS232 Transceiver with Narrow 16-Lead SOIC
LT1381I S	Dual RS232 Transceiver with Narrow 16-Lead SOIC
LTC1382C SW	5V Low Power RS232 Transceiver
LTC1383C S	5V Low Power RS232 Transceiver
LTC1384C G, SW	5V Low Power RS232 Transceiver with 3 RX Active in Shutdown
LTC1385C G, SW	3V Low Power EIA/TIA562 Transceiver with 2 RX Active in Shutdown
LTC1386C S	RS232 2-DX/2-RX in Narrow SOIC
LTC1480C S8	3V powered RS485 Transceiver
LTC1480I S8	3V powered RS485 Transceiver
LTC1481C S8	Ultralow Power RS485 Transceiver with Shutdown
LTC1482C S8	Low Power RS485 Transceiver with Carrier Detect
LTC1482I S8	Low Power RS485 Transceiver with Carrier Detect

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# SURFACE MOUNT PRODUCTS

## Surface Mount Small Outline (SO), DD and SOT Device Packaging

PRODUCT	DESCRIPTION
LTC1483C S8	Low EMI Ultralow Power RS485 Transceiver with Shutdown
LTC1483I S8	Low EMI Ultralow Power RS485 Transceiver with Shutdown
LTC1484C S8	Low Power RS485 Transceiver w/Fail-Safe Receiver Input
LTC1484I S8	Low Power RS485 Transceiver w/Fail-Safe Receiver Input
LTC1485C S8	10Mbit/s Low Power RS485 Half-Duplex Transceiver
LTC1485I S8	High Speed RS485 DX/RX
LTC1487C S8	High Input Impedance Ultralow Power RS485 Transceiver with Shutdown
LTC1487I S8	High Input Impedance Ultralow Power RS485 Transceiver with Shutdown
LT1537C G, SW	±15kV ESD Protected RS232 3-DX/5-RX
LT1537I G, SW	±15kV ESD Protected RS232 3-DX/5-RX
<b>Analog Switches</b>	
LTC201AC S	Micropower, Low Charge Injection, Quad CMOS Analog Switch
LTC202C S	Micropower, Low Charge Injection, Quad CMOS Analog Switch
LTC203C S	Micropower, Low Charge Injection, Quad CMOS Analog Switch
LTC221C S	Micropower, Low Charge Injection, Quad CMOS Analog Switch with Data Latches
LTC222C S	Micropower, Low Charge Injection, Quad CMOS Analog Switch with Data Latches
<b>High Side Switches and Drivers</b>	
LTC1153C S8	Electronic Circuit Breaker
LTC1154C S8	Single High Side MOSFET Switch Driver
LTC1155C S8	Dual High Side MOSFET Switch Driver
LTC1155I S8	Dual High Side MOSFET Switch Driver
LTC1156C SW	Quad High Side MOSFET Switch Driver
LTC1157C S8	Dual 3.3V Supply High-Side MOSFET Switch Driver
LT1158C SW	Half-Bridge N-Channel Power MOSFET Driver
LT1158I SW	Half-Bridge N-Channel Power MOSFET Driver
LT1161C SW	Quad High Side MOSFET Driver
LT1161I SW	Quad High Voltage, High Side N-Channel MOSFET Driver
LTC1163C S8	Triple 1.8V Supply High-Side MOSFET Switch
LTC1165C S8	Triple 1.8V Supply High-Side MOSFET Switch
LTC1177C S, S-5 S-12	High Side Switch Driver
LTC1255C S8	Dual 24V High Side Switch Driver
LTC1255I S8	Dual 24V High Side Switch Driver
LTC1477C S8	High Side Switches and Drivers
LTC1478C S8	High Side Switches and Drivers

PRODUCT	DESCRIPTION
<b>Watchdog Timer/Microprocessor Supervisory</b>	
LTC690C S8	Microprocessor Supervisory Circuit
LTC690I S8	Microprocessor Supervisory Circuit
LTC691C SW	Microprocessor Supervisory Circuit
LTC691I SW	Microprocessor Supervisory Circuit
LTC692C S8	Microprocessor Supervisory Circuit
LTC692I S8	Microprocessor Supervisory Circuit
LTC693C SW	Microprocessor Supervisory Circuit
LTC693I SW	Microprocessor Supervisory Circuit
LTC694C S8	Microprocessor Supervisory Circuit
LTC694C S8-3.3	3.3V Microprocessor Supervisory Circuit
LTC694I S8	Microprocessor Supervisory Circuit
LTC694I S8-3.3	3.3V Microprocessor Supervisory Circuit
LTC695C SW	Microprocessor Supervisory Circuit
LTC695C S-3.3	3.3V Microprocessor Supervisory Circuit
LTC695I SW	Microprocessor Supervisory Circuit
LTC695I S-3.3	3.3V Microprocessor Supervisory Circuit
LTC699C S8	Microprocessor Supervisory Circuit
LTC699I S8	Microprocessor Supervisory Circuit
LTC1232C S8	Microprocessor Supervisory Circuit
LTC1232I S8	Microprocessor Supervisory Circuit
LTC1235C SW	Microprocessor Supervisory Circuit
LTC1235I SW	Microprocessor Supervisory Circuit
<b>Video Multiplexers</b>	
LT1203 S8	150MHz, 2:1 Video Multiplexer
LT1204 SW	4-Input Video Multiplexer with 75MHz CFA
LT1205 S	Dual 150MHz, 2:1 or 4:1 Video Multiplexer
<b>PCMCIA Power Management</b>	
LT1106C F	µPower DC/DC Converter for PCMCIA Flash Memory Cards
LT1312C S8	Single PCMCIA VPP Regulator
LT1313C S	Dual PCMCIA VPP Regulator
LTC1314C G, S	Single PCMCIA VPP Switch/V <sub>CC</sub> Driver
LTC1315C G, S	Dual PCMCIA VPP Switch/V <sub>CC</sub> Driver
LTC1470C S8	Single Protected 1A PCMCIA V <sub>CC</sub> Switch
LTC1471C S	Dual Protected 1A PCMCIA V <sub>CC</sub> Switch
LTC1472C S	Single Protected PCMCIA VPP and V <sub>CC</sub> Switch