This document provides a guide to the part numbering codes used by Allegro™ MicroSystems for general sales customer orders. Current individual datasheets for specific parts should be consulted before ordering. This guide should be used for reference only and is not intended to be a complete source and may be superseded by subsequent procedures. Individual part numbers may deviate from the specifications in this document. All possible combinations of device type, operating temperature range, and package style are not necessarily available.

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Complete Part Numbers

Complete Part Number Format
("A" initial character style, general product lines)

Instructions (Special Configuration)
Package Designation

Allegro Identifier (Device Family)
Device Type
Operating Temperature Range
Instructions (Packing Leadform)
Leadframe Plating

Allegro Identifier [A, and optional 1 to 2 letters]
Device Type [3 to 4 numbers] functional type
Operating Temperature Range [1 letter] ambient temperature range
Package Designation [1 or 2 letters] body configuration
Instructions (Finishing) Leadform/packing option, etc. Blank indicates default configuration
Leadframe Plating [*-* and 1 letter] nonlead (Pb-free) option

Complete Part Number Format
("A" initial character style, for all part numbers with 5-digit device type)

Instructions (Special Configuration)
Package Designation

Allegro Identifier (Device Family)
Device Type
Operating Temperature Range
Instructions (Packing Leadform)

Allegro Identifier [A, and optional 1 to 2 letters]
Device Type [5 numbers] functional type
Operating Temperature Range [1 letter] ambient temperature range
Package Designation [3 letters] body configuration
Instructions (Finishing) Leadform/packing option, etc. Blank indicates default configuration

Complete Part Number Format
(Sensed current range style, current sensor IC product lines)

Instructions (Special Configuration)
Package Designation

Allegro Identifier (Device Family)
Device Type
Operating Temperature Range
Instructions (Packing Leadform)
Current Sensing Range
Leadframe Plating

Allegro Identifier ACS
Device Type [3 numbers] functional type
Operating Temperature Range [1 letter] ambient temperature range
Package Designation [1 or 2 letters] body configuration
Instructions (Finishing) Leadform/packing option, etc. Blank indicates default configuration
Current Sensing Range [3 numbers] optimal sensing amperage range
[1 letter] measurable sensing range multiplier. A: 1 × optimal, B: 2 × optimal, C: 3 × optimal
Leadform (75x series) [3 letters] PFF: formed signal leads, formed current terminals, PSF: formed signal leads, straight current terminals, PSS: straight signal leads, straight current terminals
Leadframe Plating [*-* and 1 letter] nonlead (Pb-free) option
Complete Part Numbers (continued)

Complete Part Number Format
("U" initial character style, general product lines)

<table>
<thead>
<tr>
<th>Allegro Identifier</th>
<th>UD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature Range</td>
<td>[1 letter] ambient temperature range</td>
</tr>
<tr>
<td>Device Type</td>
<td>[3 to 4 numbers] functional type</td>
</tr>
<tr>
<td>Package Designation</td>
<td>[1 or 2 letters] body configuration</td>
</tr>
<tr>
<td>Instructions (Finishing)</td>
<td>Leadform/packing option, etc. Blank indicates default configuration</td>
</tr>
<tr>
<td>Leadframe Plating</td>
<td>[-] and 1 letter nonlead (Pb-free) option</td>
</tr>
</tbody>
</table>
Operating Temperature Ranges

Complete Part Number Format
("A" initial character style, general product lines)

<table>
<thead>
<tr>
<th>Part Number Token</th>
<th>Descriptor</th>
<th>Operating Ambient Temperature Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Commercial A</td>
<td>–10°C to 60°C</td>
</tr>
<tr>
<td>B</td>
<td>Extended Commercial B</td>
<td>–25°C to 75°C</td>
</tr>
<tr>
<td>C</td>
<td>Commercial C</td>
<td>0°C to 70°C</td>
</tr>
<tr>
<td>D</td>
<td>Commercial D</td>
<td>0°C to 50°C</td>
</tr>
<tr>
<td>E</td>
<td>Extended Automotive/Industrial E</td>
<td>–40°C to 85°C</td>
</tr>
<tr>
<td>F</td>
<td>Extended Automotive/Industrial F</td>
<td>–40°C to 95°C</td>
</tr>
<tr>
<td>G</td>
<td>Extended Industrial</td>
<td>–40°C to 105°C</td>
</tr>
<tr>
<td>K</td>
<td>Extended Industrial</td>
<td>–40°C to 125°C, –40°C to 135°C, when T_j (max) ≤ 150°C</td>
</tr>
<tr>
<td>L</td>
<td>Automotive</td>
<td>–40°C to 150°C</td>
</tr>
<tr>
<td>M</td>
<td>Extended Commercial M</td>
<td>–20°C to 105°C</td>
</tr>
<tr>
<td>P</td>
<td>Extended Automotive/Commercial P</td>
<td>–40°C to 160°C</td>
</tr>
<tr>
<td>S</td>
<td>Standard</td>
<td>–20°C to 85°C</td>
</tr>
<tr>
<td>X</td>
<td>Custom</td>
<td>Refer to datasheet for custom temperature range</td>
</tr>
</tbody>
</table>

Complete Part Number Format
("U" initial character style, general product lines)

<table>
<thead>
<tr>
<th>Part Number Token</th>
<th>Descriptor</th>
<th>Operating Ambient Temperature Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>K</td>
<td>Extended Automotive/Industrial</td>
<td>–40°C to 125°C (typical)</td>
</tr>
<tr>
<td>N</td>
<td>Commercial/Industrial</td>
<td>–20°C to 85°C (typical)</td>
</tr>
<tr>
<td>Q</td>
<td>Automotive/Industrial</td>
<td>–40°C to 85°C (typical)</td>
</tr>
</tbody>
</table>
# Package Designators

A – Dual in-line (MS-001, MS-010, MS-011)

B – Dual in-line with heat-sink semi-tabs (MS-001, MS-010)

CA – Current sensor device

CB – Current sensor device

CG – Chip scale device

CW – Unscribed wafer

EC – Square leadless (exposed pad) 0.40 mm contact pitch, quad very-very-thin chip carrier (MO-220)

EE – Square leadless (exposed pad) 0.50 mm contact pitch, dual ultra-thin chip carrier (MO-229)

EG – Rectangular leadless (exposed pad) 0.50 mm pitch, quad very-very-thin chip carrier (MO 220)

EH – Rectangular leadless (exposed pad) 0.50 mm pitch, dual very-very-thin chip carrier (MO 229)

EI – Square leadless (exposed pad) 0.50 mm pitch, dual very-very-thin chip carrier (MO-229)

EK – Square leadless (exposed pad) 0.95 mm pitch, dual very-very-thin chip carrier (MO-229)

ES – Square leadless (exposed pad) 0.50 mm contact pitch, quad very-very-thin chip carrier (MO-220)

EU – Square leadless (exposed pad) 0.65 mm contact pitch, quad very-very-thin chip carrier (MO-220)

EV – Square leadless (exposed pad) 0.50 mm contact pitch, quad very-thin chip carrier (MO-220)

EW – Rect. leadless (exposed pad) 0.50 mm contact pitch, dual super-thin chip carrier (MO-229)

EX – Square leadless (exposed current loop) 0.50 mm contact pitch, quad very-very-thin chip carrier (MO-220)

JP – Low-profile QFP (exposed pad) (MS-026)

JS – Thin-profile QFP (exposed pad) (MS-026)

K – Mini-SIP, four leads

KA – Mini-SIP, five leads

KB – Mini-SIP, three leads

KC – Mini-SIP, three leads

KE – Mini-SIP, four leads

KN – Mini-SIP, four leads

KT – Mini-SIP, four leads

L – Narrow-body SOIC (MS-012)

LA – Wide-body SOIC with internal sensed current path (MS-013)

LB – Wide-body SOIC with heat-sink semi-tabs (MS-013)

LC – Current sensor, narrow-body SOIC (MS-012)

LD – TSSOP, 0.50 mm pitch (MO-153)

LE – TSSOP, 0.65 mm pitch (MO-153)

LF – QSOP 0.635 mm pitch

LG – TSSOP with heat-sink semi-tabs, 0.50 mm pitch

MH – Low-profile, three- or five-terminal surface mount (SOT23W)

LJ – Eight-lead narrow-body SOIC with exposed pad (MS-012)

LK – Narrow-body SOIC with 1 mm pin pitch

LL – SOT, three leads (SOT89/TO-243AA) prior to trimming

LN – Narrow-body SSOP with 1 mm pin pitch

LP – TSSOP (exposed pad), 0.65 mm pitch (MO-153)

LQ – QSOP, 0.80 mm pitch

LR – Current sensor device

LS – Current sensor device

LT – SOT, three leads (SOT89/TO-243AA)

LU – TSSOP, 0.65 mm pitch (MO-153AA), 8 leads

LV – TSSOP (exposed pad), 0.50 mm pitch, 38 leads

LW – Wide-body SOIC (MS-013)

LY – Narrow-body TSSOP (exposed pad), 0.50 mm pitch

MA – Wide-body SOIC with internal sensed current path (MS-013)

ML – SOIC, 1.27 mm pitch, 8 leads

SE – SIP, 4 leads, sensor Hall device combined in overmolded case

SG – SIP, 4 leads, sensor Hall device combined in overmolded case

SH – SIP, 4 leads, sensor Hall device combined in overmolded case

SJ – SIP, 4 leads, sensor Hall device combined in overmolded case

SL – SIP, 4 leads, sensor Hall device combined in overmolded case

SM – SIP, 3 leads, sensor Hall device combined in overmolded case

SN – SIP, 2 leads, sensor Hall device combined in overmolded case

SP – SIP, 3 leads, sensor Hall device combined in overmolded case

UA – Three-lead, thin mini-SIP

UB – Two-lead, thin mini-SIP

UC – Three-lead, thin mini-SIP

UD – Sensor Hall device with 1 passive component

UE – Two-lead, thin mini-SIP, sensor Hall device with recessed tie bar burr area at top of package

WB – Wafer with Wafer Backside Coating, sawn or unsawn

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Note: Two character package designators shown; some part numbering variations use three character package designations (not shown).
Instructions (Finishing)

Package/Leadform
LC – Spread leadform
LF – Lead form per customer drawing
LT – Tape and reel
LX – Tape and reel
PFF – Plated, formed power leads, formed signal leads
PSF – Plated, straight power leads, formed signal leads
PSS – Plated, straight power leads, straight signal leads
SR – 13” Tape and reel
TA – Tape and reel
TI – Tape and reel, straight leadform
TK – Tape and reel
TL – Horizontal-mount leadform, bulk
TN – Tape and reel
TR – Tape and reel
TS – Horizontal-mount leadform, tape and reel

Special Configuration
-I1, -I2, -I3 – Two-wire current level
-LN – Low on tooth
-LT – Low on tooth/TPOS
-R – Internal pull-up resistor

Note: Special configurations shown represent a sample of available special configurations.

Leadframe Plating
-B – Tin-Bismuth
-J – Wettable flank
-P – Nickel Palladium-Gold
-R – Sidewall plating
-T – Matte tin
### Revision History

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<tr>
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<th>Date</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>April 30, 2014</td>
<td>Added UB package</td>
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<tr>
<td>2</td>
<td>August 20, 2014</td>
<td>Added -R and -B designators to Leadframe Plating</td>
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<td>3</td>
<td>November 20, 2014</td>
<td>Updated Package Designators list</td>
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<td>4</td>
<td>January 21, 2015</td>
<td>Added MA package to Package Designators list</td>
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<tr>
<td>5</td>
<td>February 22, 2016</td>
<td>Updated Complete Part Numbers format</td>
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<td>6</td>
<td>August 29, 2016</td>
<td>Added SR package/leadform, -J leadframe plating, and LR package</td>
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<tr>
<td>7</td>
<td>February 8, 2017</td>
<td>Added notes to Package Designators and Special Configuration</td>
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<tr>
<td>8</td>
<td>July 20, 2017</td>
<td>Added LS, SL, SM, SN, and UC packages to Package Designators list</td>
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<tr>
<td>9</td>
<td>September 12, 2018</td>
<td>Added CW, LL, SP, UD, UE, WB; removed ED, EF, M</td>
</tr>
<tr>
<td>10</td>
<td>September 19, 2019</td>
<td>Removed EL package designator; other minor editorial updates</td>
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