

## *Allegro Part Numbering Guide*

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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 This guide should be used for reference only and is not intended to be a complete source and may be superseded by subsequent procedures.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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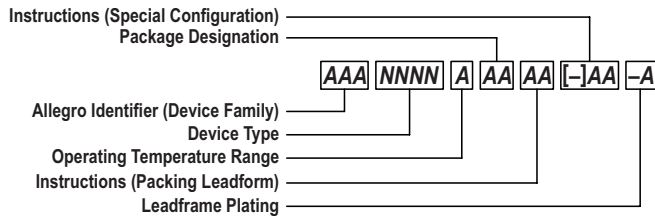
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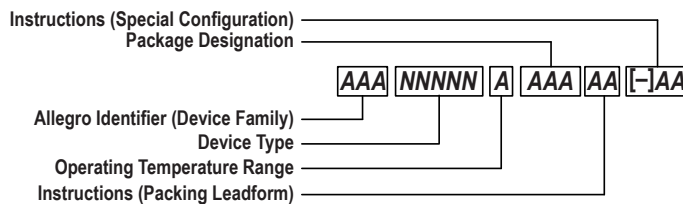
# Complete Part Numbers

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



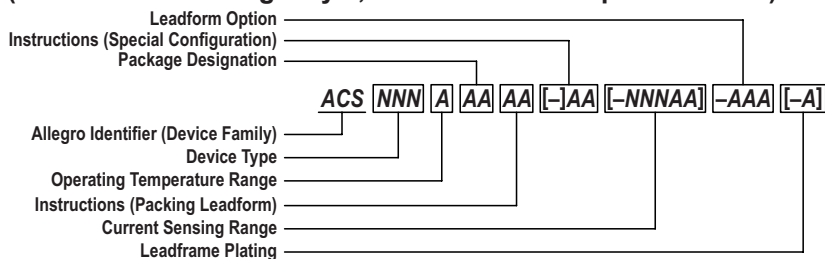
Allegro Identifier	[A, and optional 1 to 2 letters]
Device Type	[3 to 4 numbers] functional type
Operating Temperature Range	[1 letter] ambient temperature range
Package Designation	[1 or 2 letters] body configuration
Instructions (Finishing)	Leadform/packing option, etc. Blank indicates default configuration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



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

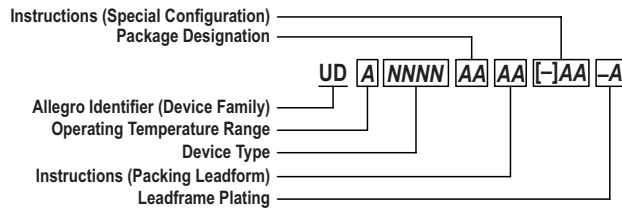
## Complete Part Number Format (Sensed current range style, current sensor IC product lines)



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 [1 letter] current direction measurable. B: bidirectional, U: unidirectional
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)



Allegro Identifier	UD
Operating Temperature Range	[1 letter] ambient temperature range
Device Type	[3 to 4 numbers] functional type
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

## Operating Temperature Ranges

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

Part Number Token	Descriptor	Operating Ambient Temperature Range
A	Commercial A	-10°C to 60°C
B	Extended Commercial B	-25°C to 75°C
C	Commercial C	0°C to 70°C
D	Commercial D	0°C to 50°C
E	Extended Automotive/Industrial E	-40°C to 85°C
F	Extended Automotive/Industrial F	-40°C to 95°C
G	Extended Industrial	-40°C to 105°C
K	Extended Industrial	-40°C to 125°C -40°C to 135°C -40°C to 150°C, when $T_J(\text{max}) \leq 150^\circ\text{C}$
L	Automotive	-40°C to 150°C
M	Extended Commercial M	-20°C to 105°C
P	Extended Automotive/Commercial P	-40°C to 160°C
S	Standard	-20°C to 85°C
X	Custom	Refer to datasheet for custom temperature range

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

Part Number Token	Descriptor	Operating Ambient Temperature Range
K	Extended Automotive/Industrial	-40°C to 125°C (typical)
N	Commercial/Industrial	-20°C to 85°C (typical)
Q	Automotive/Industrial	-40°C to 85°C (typical)

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## 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)  
EJ – 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)  
EL – Square leadless (exposed pad) 0.50 mm pitch, dual ultra-thin chip carrier (MO-229)  
ES – Square leadless (exposed pad) 0.50 mm contact pitch, quad very-very-thin chip carrier (MO-220)  
ET – Square leadless (exposed pad) 0.50 mm contact pitch, quad 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 semitabs, 0.50 mm pitch  
LH – 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)  
OL – 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

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

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## 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

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## Revision History

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

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