

## ON Semiconductor Device Nomenclature

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ON Semiconductor



**ON Semiconductor®**

<http://onsemi.com>

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### REFERENCE MANUAL

Whenever possible, ON Semiconductor uses the following numbering systems in the naming of their products.

The ESD/TVS, small signal diode and transistor, and thyristor portfolios have no single standard naming

#### Historical Nomenclature Notes

During its history, ON Semiconductor has been part of another company, and has acquired other companies and product lines. In order to maintain consistency for customers, part numbers have not changed, wherever possible. The following prefixes may indicate the original manufacturer:

- ADP** – Analog Devices, Inc.
- ADT** – Analog Devices, Inc.
- AMIS** – AMI Semiconductor
- ASM** – PulseCore
- CAT** – Catalyst Semiconductor
- CS** – Cherry Semiconductor
- MC** – Motorola

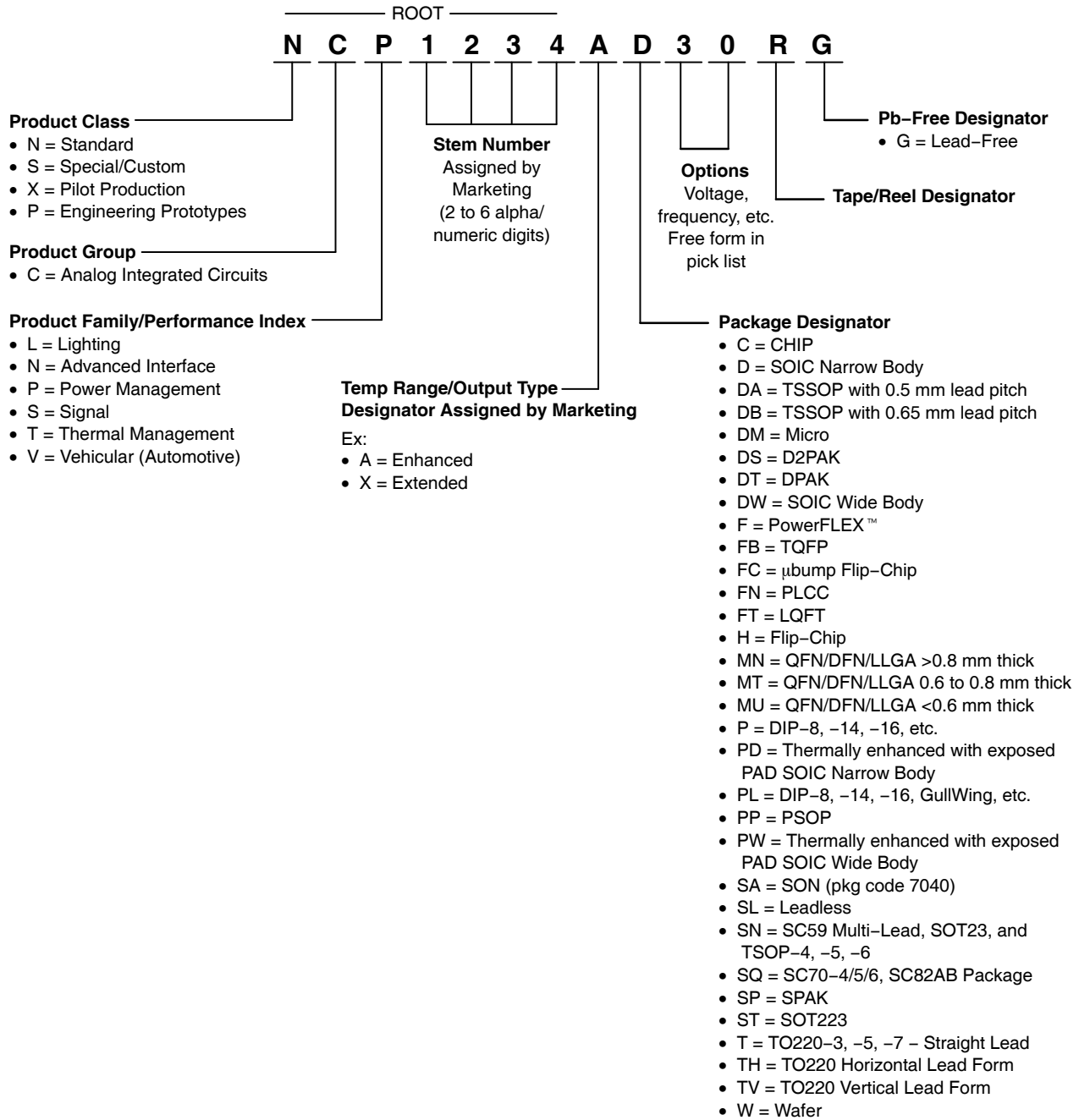
convention. They consist of many industry standard nomenclatures, along with several market targeted naming conventions. For any questions, please contact your local ON Semiconductor sales representative.

#### Current Nomenclature Notes

Analog .....	2
CMOS Logic .....	3
Analog Switch .....	3
Clock and Data Management .....	4
Integrated Solutions .....	6
MOS Power .....	7
Power MOSFETs – SO-8 (MiniMOS™), Micro8™, SOT-223, and TSOP-6 .....	8
Bipolar Power .....	9
Rectifiers .....	11
FMO Bump .....	12
Ambient Light Sensors .....	12
Contact Image Sensors & Modules .....	13
Photo Diode Arrays .....	14
LED/Lighting Products .....	14

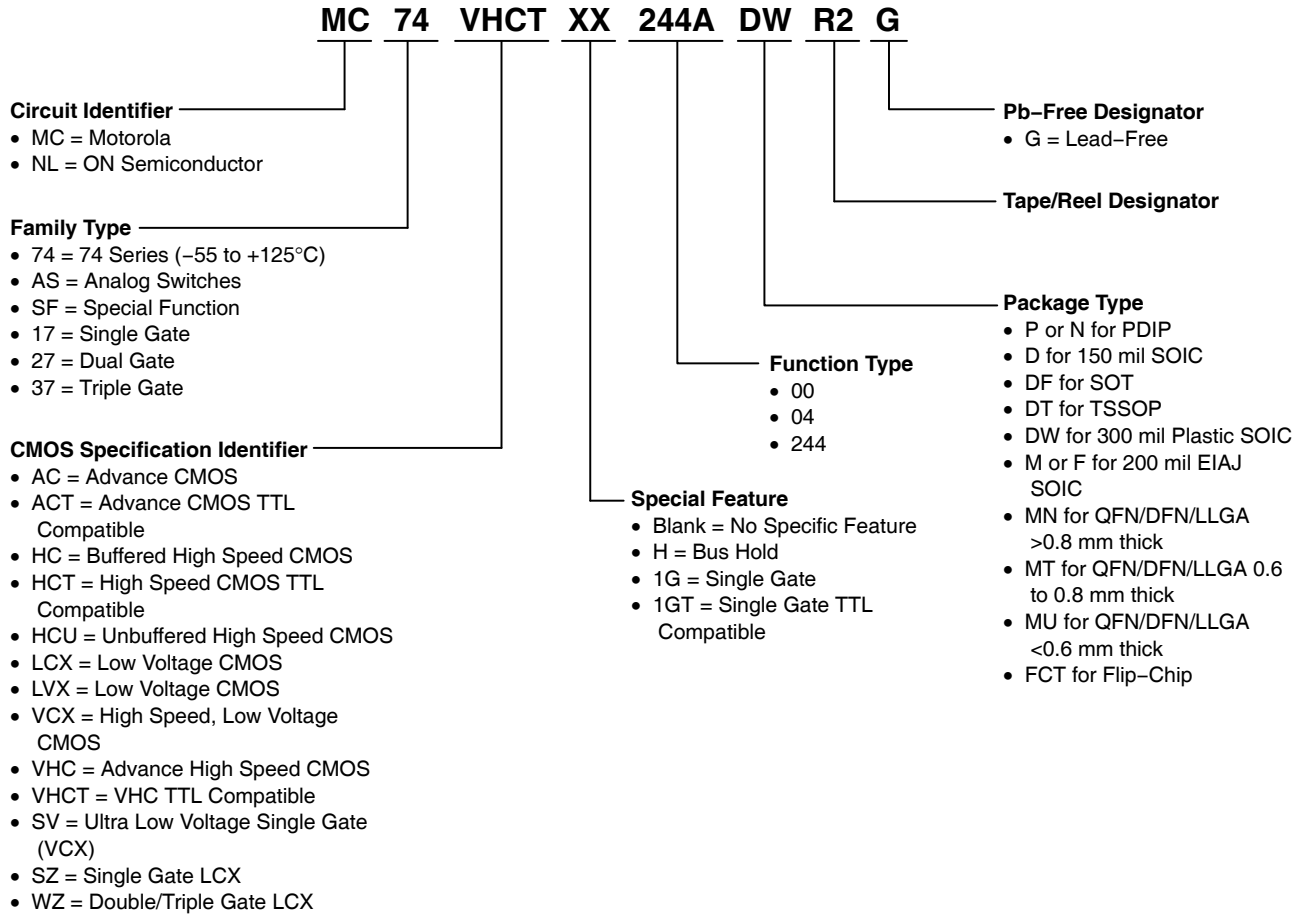
# TND310

## Naming Convention for Analog Devices

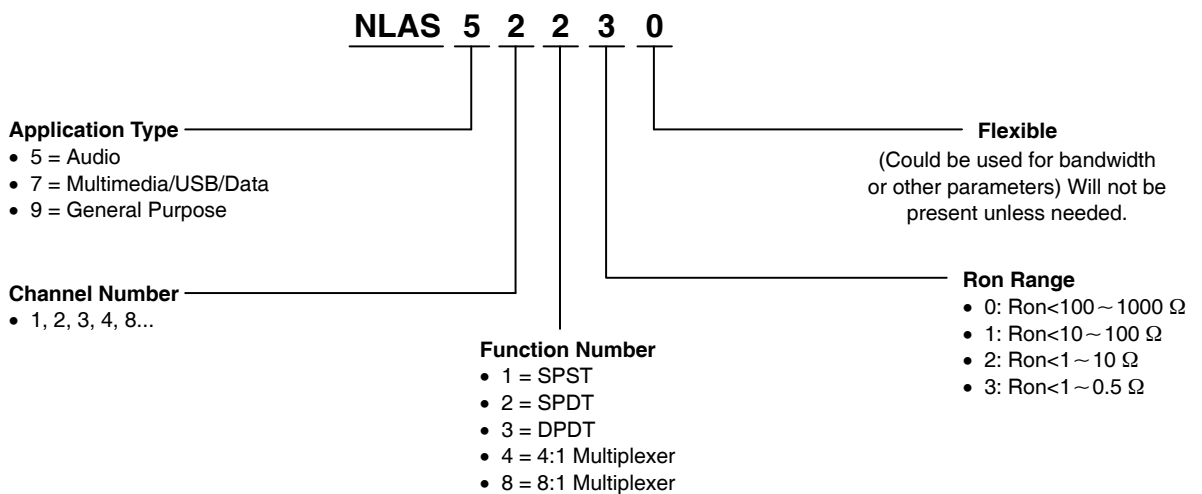


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## Naming Convention for CMOS Logic Family Devices

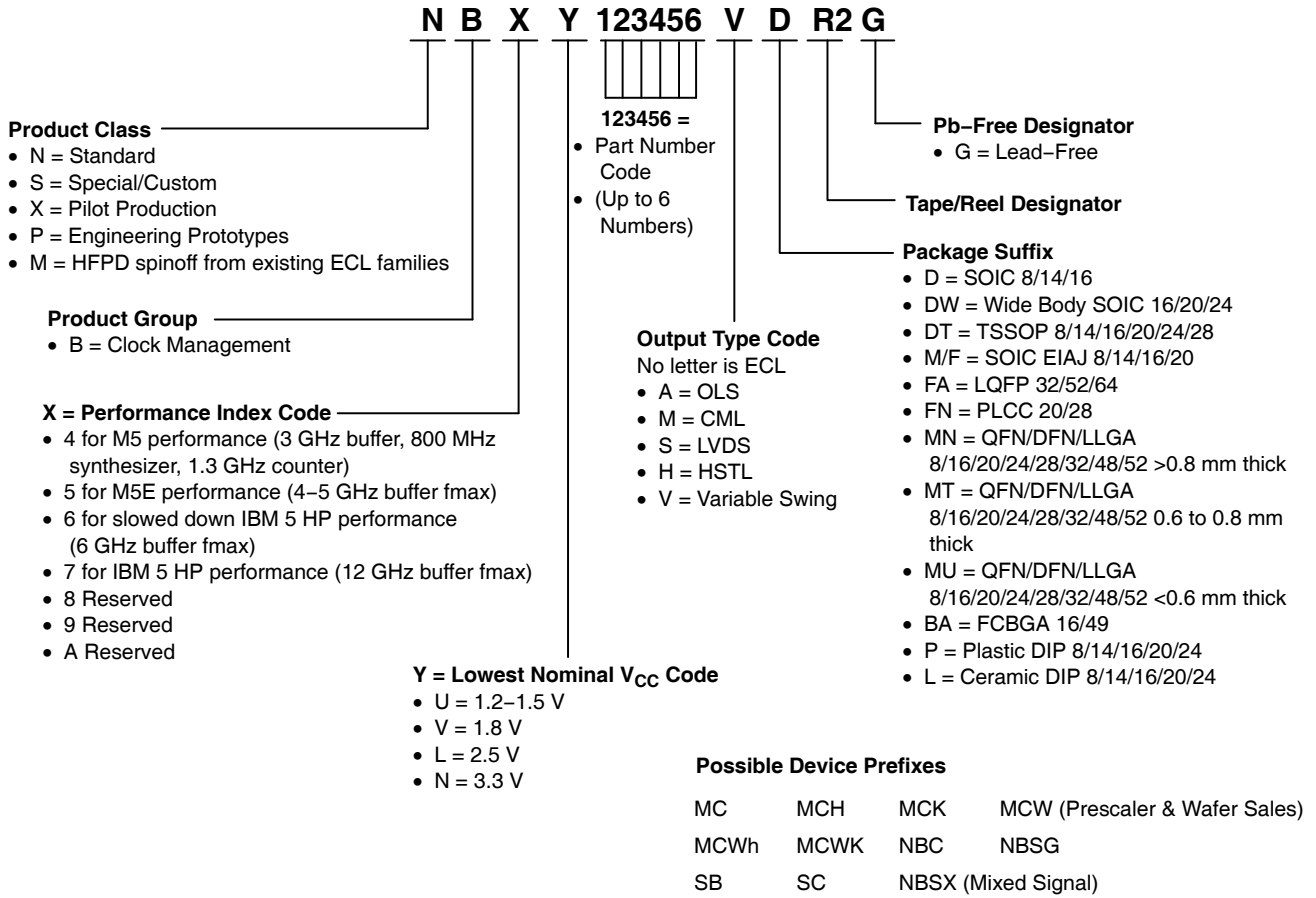


## Naming Convention for Analog Switch Devices



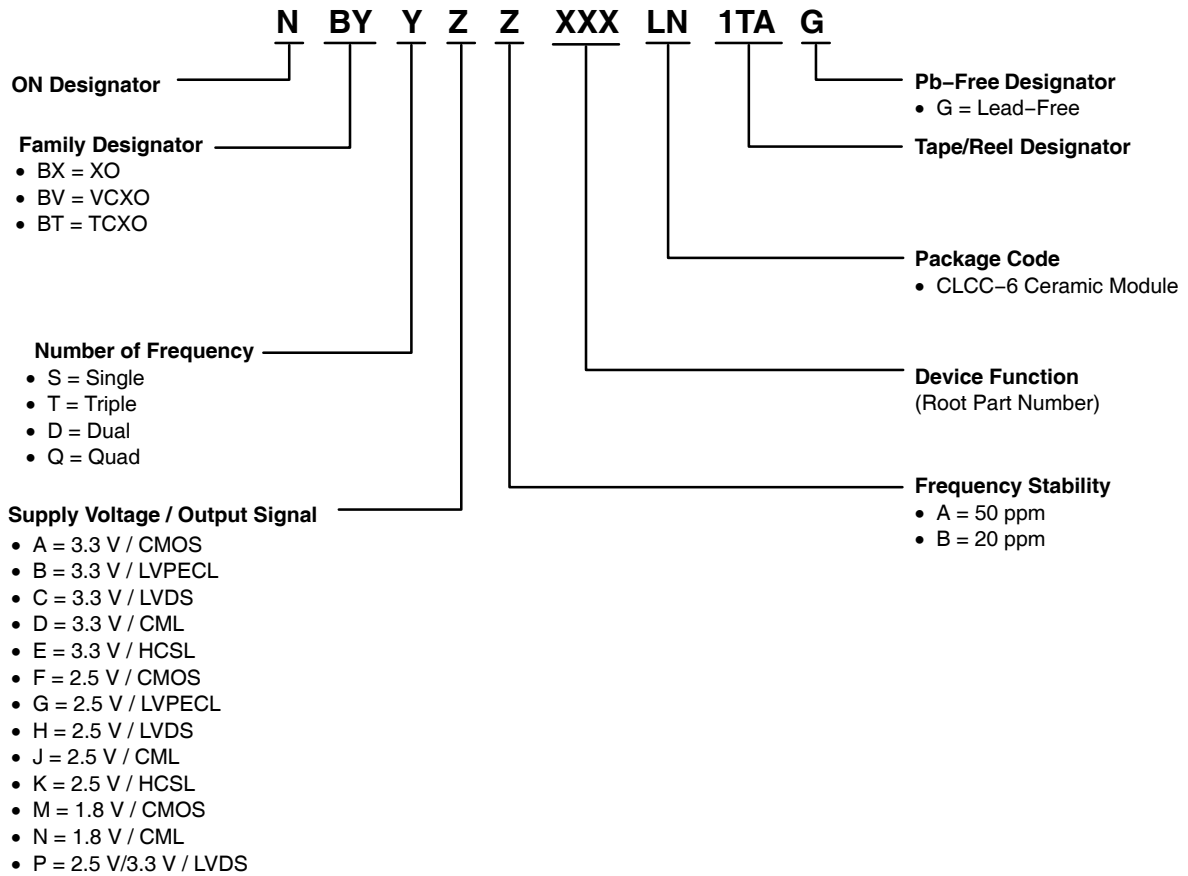
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## Naming Convention for Clock and Data Management Devices



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## Naming Convention for Crystal Oscillator Devices



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## Naming Convention for Integrated Solutions Devices

**N U D 3 1 3 4 X 6 T 1 G**

### Product Class

- N = Standard
- S = Special/Custom
- X = Pilot Production
- P = Engineering Prototypes

### Product Group

- U = MicroIntegration™
- I = Smart

### Product Family

- D = Driver
- F = Filter
- P = Protection
- S = Special Function

### Descriptor 1

Product Family Description	Symbol
Drivers Legacy	3
LED	4
Filters # of Filters	1-9
Protection # of Protected Lines	1-9
SpecFunct/Customer Special Part No	0-9

### Descriptor 2

Product Family Description	Symbol
Driver Function Type	1
Filter Part Number	0-9
Protection Line Type	1
Protection Line Type	2
SpecFunct/Customer Special Part No	0-9

### Symbol Definition

Symbol	Symbol Definition
1	Relay
0-9	4 = Audio Filters
1	Data Line Only
2	Data and Power Line
0-9	

### Pb-Free Designator

- G = Lead-Free

### Tape/Reel Designator

### Package Designator

- V = 24 Pin MLF
- H = ChipFET™
- B = D2PAK
- C = DPAK
- - Die T & R
- FC = Flip-Chip
- K = Micro8™
- U = MicroLeadless™
- QP = PLLP
- SN = POWERMITE®
- MN = QFN/DFN: >0.8 mm thick
- MT = QFN/DFN: 0.6 to 0.8 mm thick
- MU = QFN/DFN: <0.6 mm thick
- P5 = SOT953
- P6 = SOT963
- WT = SC70
- T = SC75/SC89
- W1 = SC88
- W5 = SC88A
- A = SMA
- S = SMC
- D = SOIC
- Z = SOT223
- L = SOT23
- XV5 = SOT553
- XV6 = SOT563
- E = SPAK
- M5 = TSOP5
- M = TSOP6/SC74

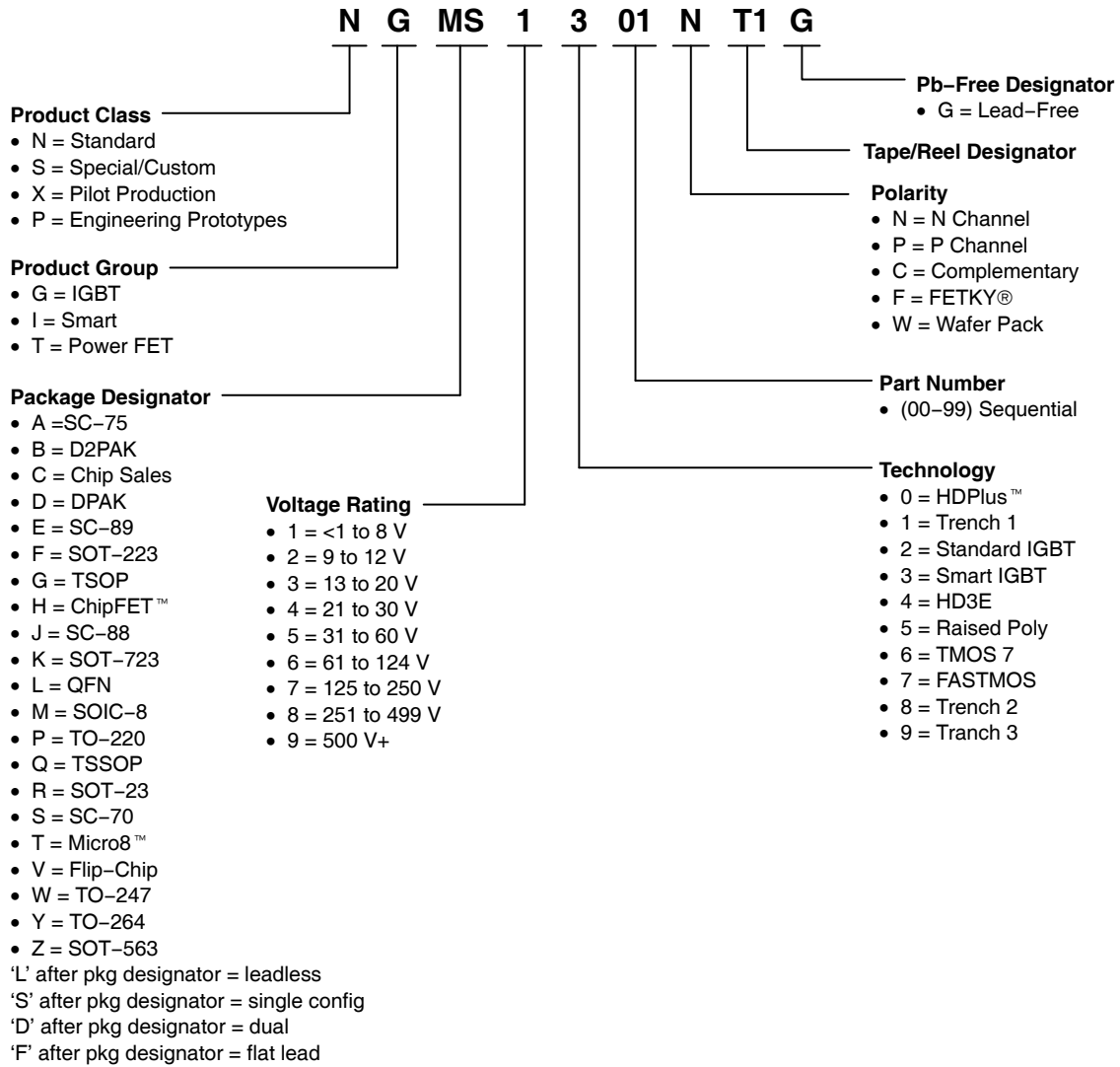
'D' before pkg designator indicates dual.  
 '1' after pkg designator = latch off SMAR only.  
 '2' after pkg designator = auto-retry for S products only.

### Descriptor 3, 4

Product Family Description	Symbol
Driver Part Number	0-9
Filter Part Number	0-9
Protection Part Number	0-9
SpecFunct/Customer Special	0-9

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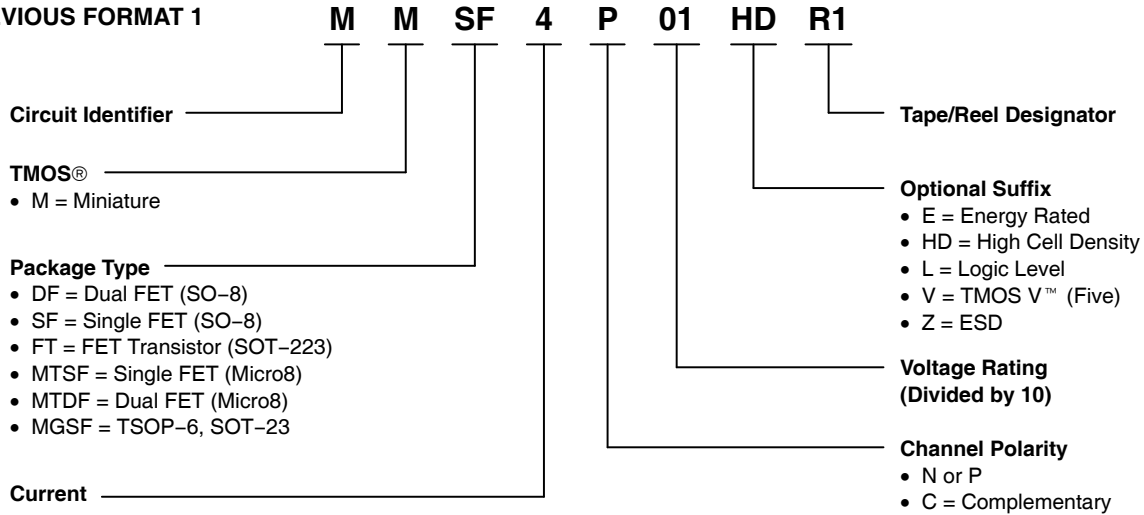
## Naming Convention for MOS Power Devices



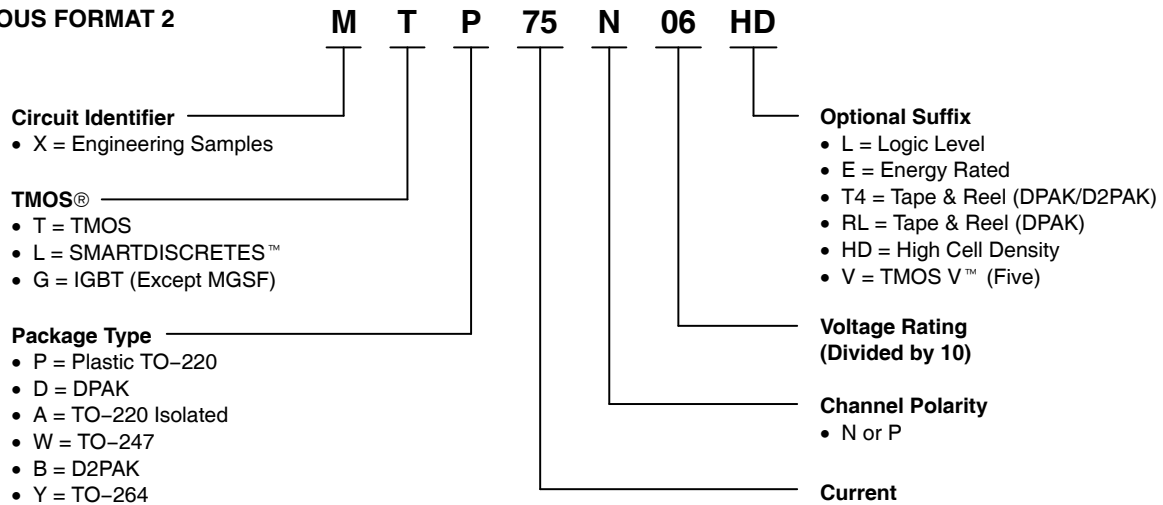
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## Naming Convention for SO-8 (MiniMOS™), Micro8™, SOT-223, and TSOP-6 Power MOSFETs

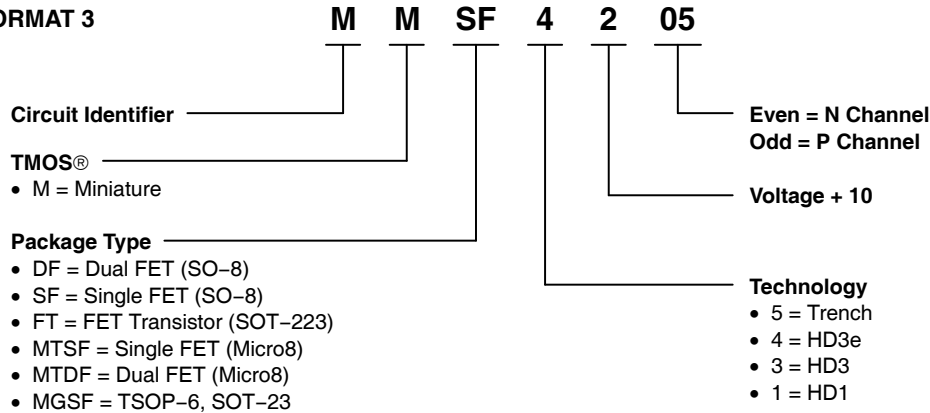
### PREVIOUS FORMAT 1



### PREVIOUS FORMAT 2



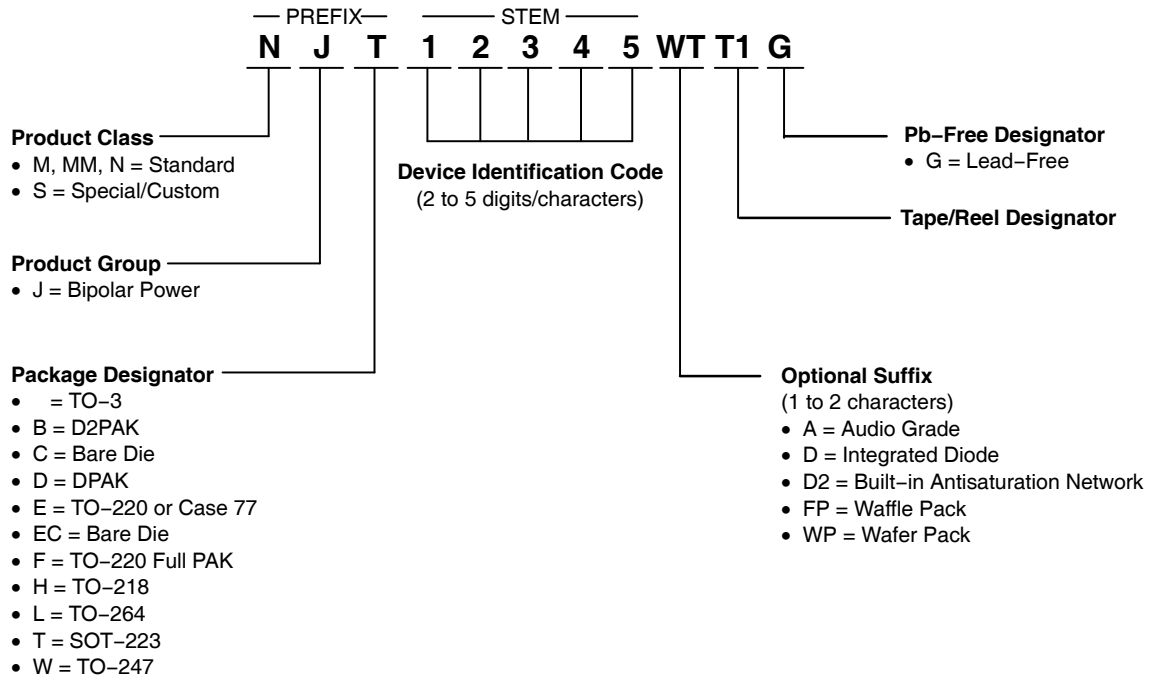
### PREVIOUS FORMAT 3





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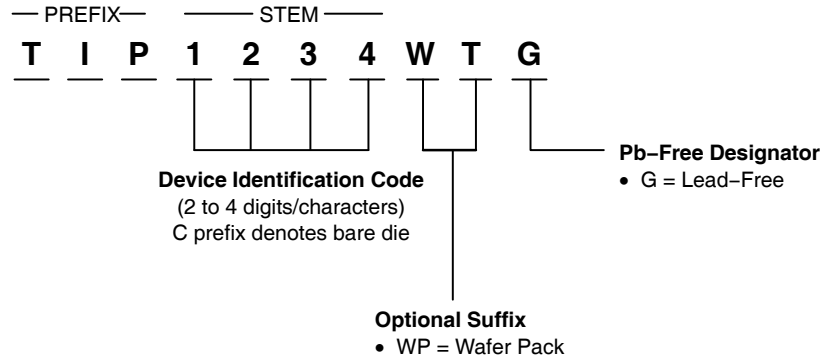
## Naming Convention for Bipolar Power Devices



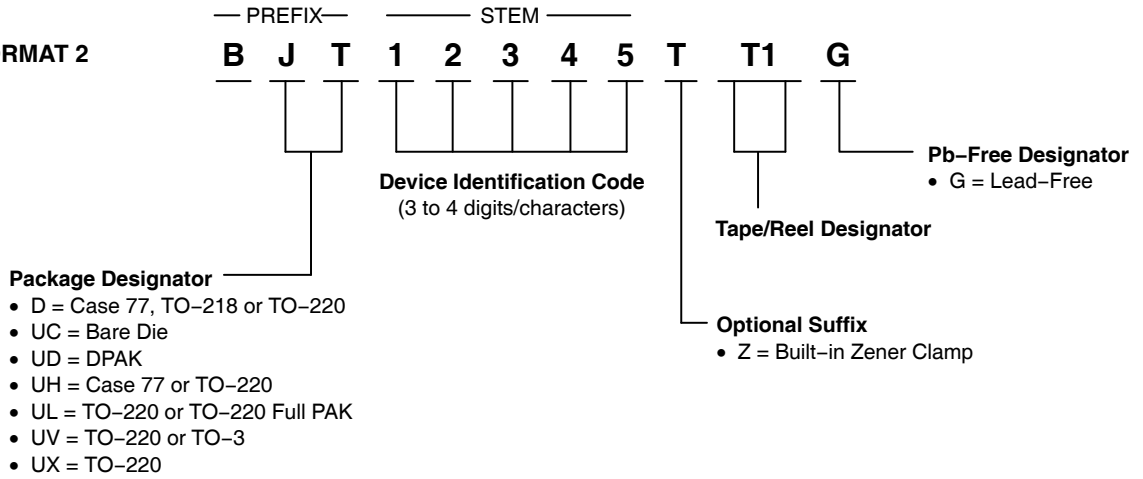
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## Naming Convention for Bipolar Power

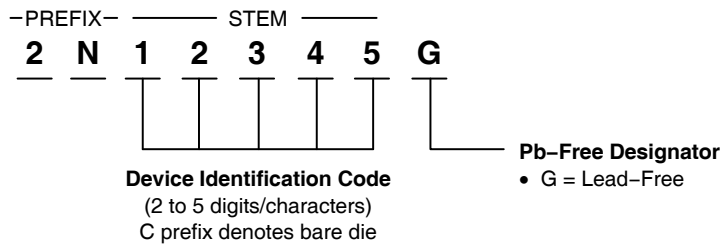
### PREVIOUS FORMAT 1



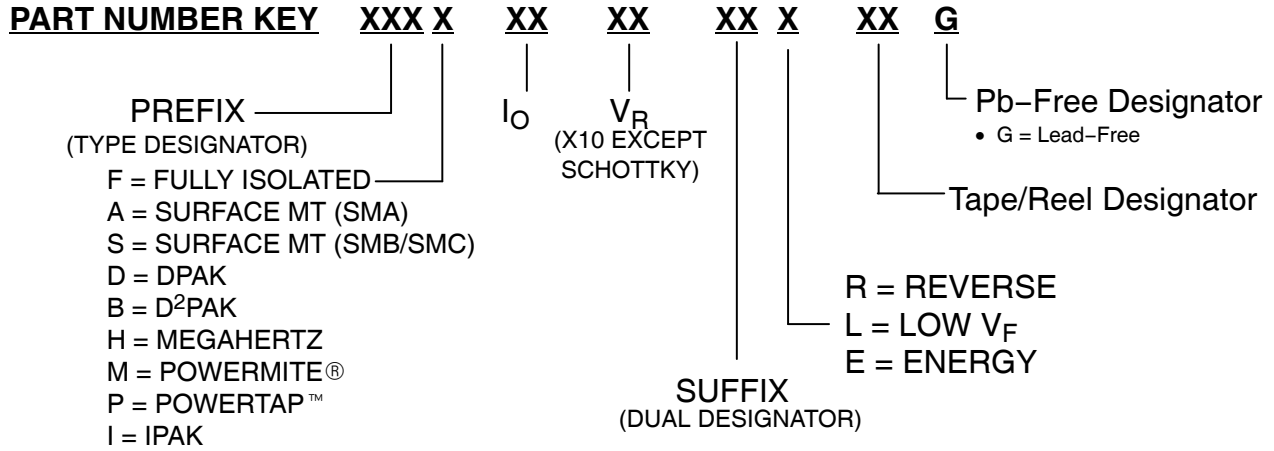
### PREVIOUS FORMAT 2



### PREVIOUS FORMAT 3



# Naming Convention for Rectifier Devices



**PREFIX KEY**

MUR = ULTRA FAST RECTIFIER  
 MBR = (SCHOTTKY) BARRIER RECTIFIER  
 MR = STANDARD & FAST RECOVERY  
 MSR = ULTRASOFT

**SUFFIX KEY**

CT = CENTER TAP (DUAL) TO-220, POWERTAP, DPAK, D<sup>2</sup>PAK  
 PT = CENTER TAP (DUAL) TO-218 PACKAGE  
 WT = CENTER TAP (DUAL) TO-247  
 SF = SOD-123 FLAT LEAD  
 PF = POWER FACTOR CORRECTION SPECIFIC

**EXAMPLE:**

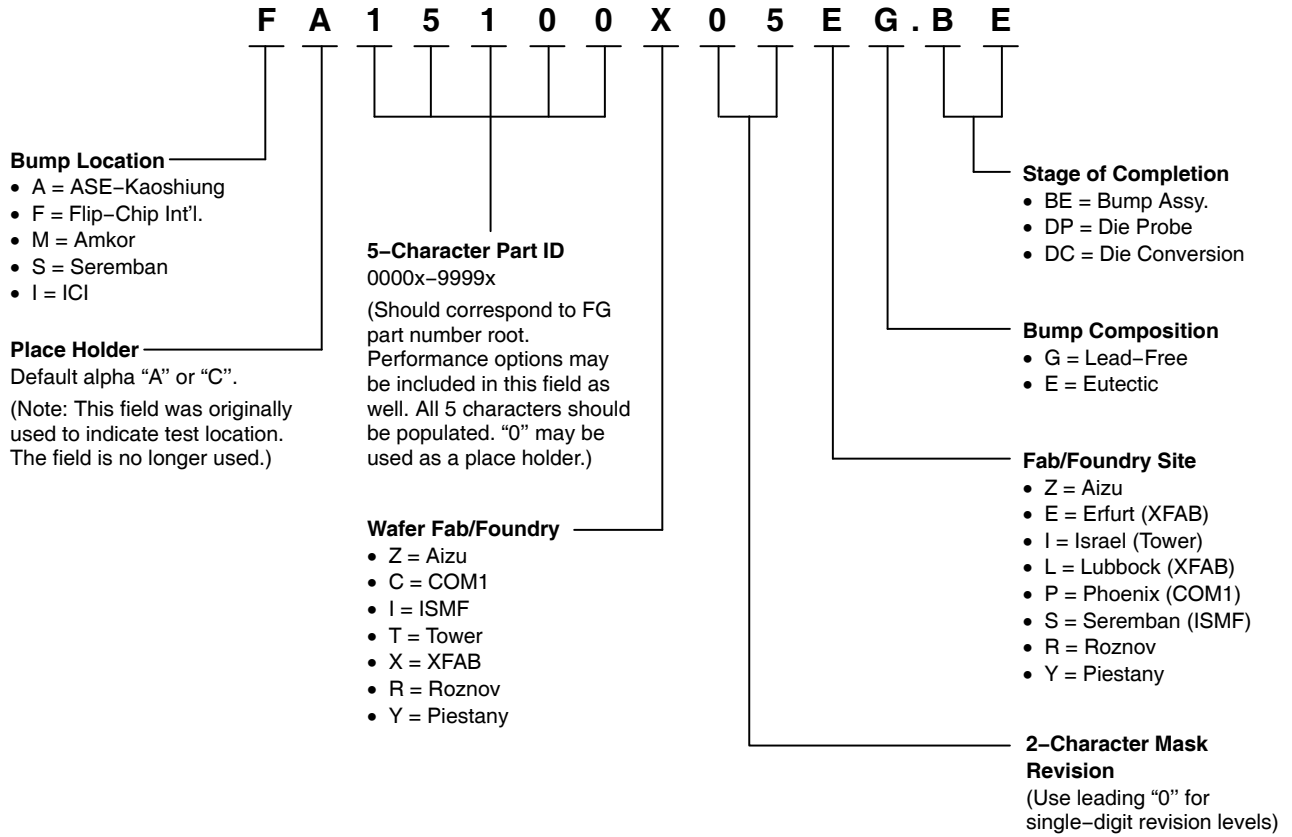
MUR	30	20	WT
ULTRAFAST	30 AMP	200 V	CENTER TAP (DUAL) TO-247

**EXAMPLE:**

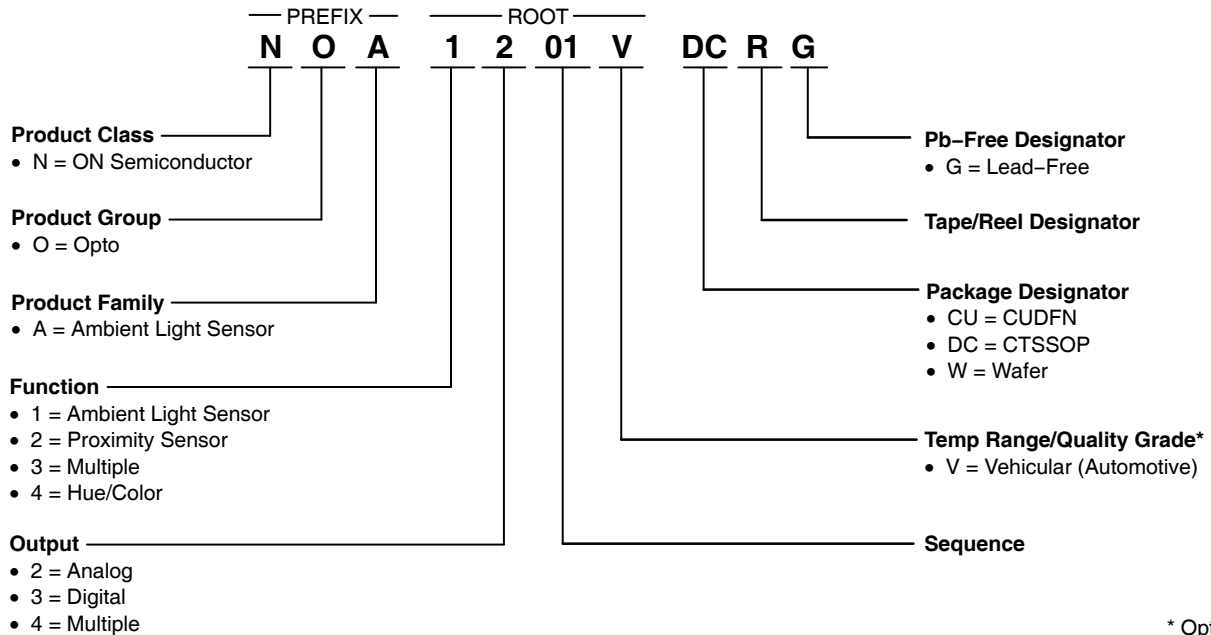
MBR	30	45	WT
SCHOTTKY	30 AMP	45 V	CENTER TAP (DUAL) TO-247

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## Naming Convention for FMO Bump



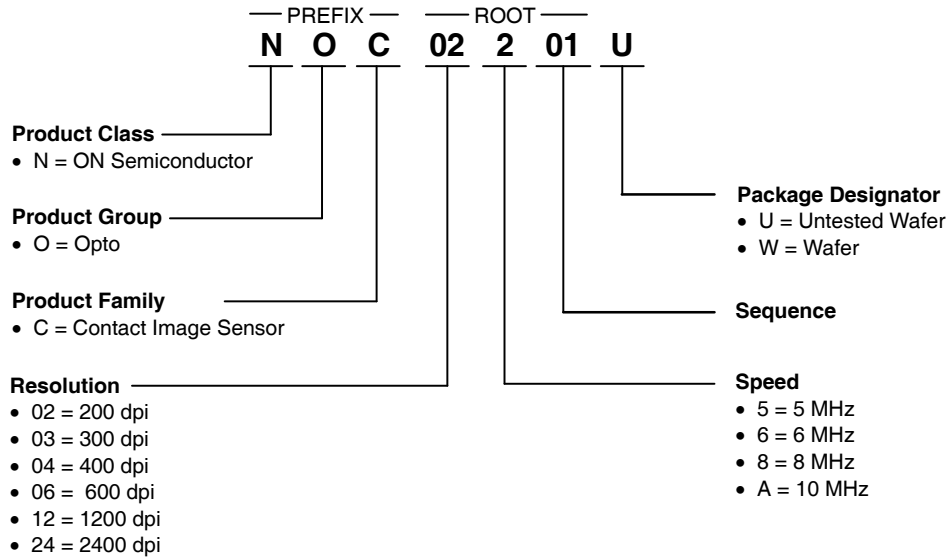
## Naming Convention for Ambient Light Sensor Devices



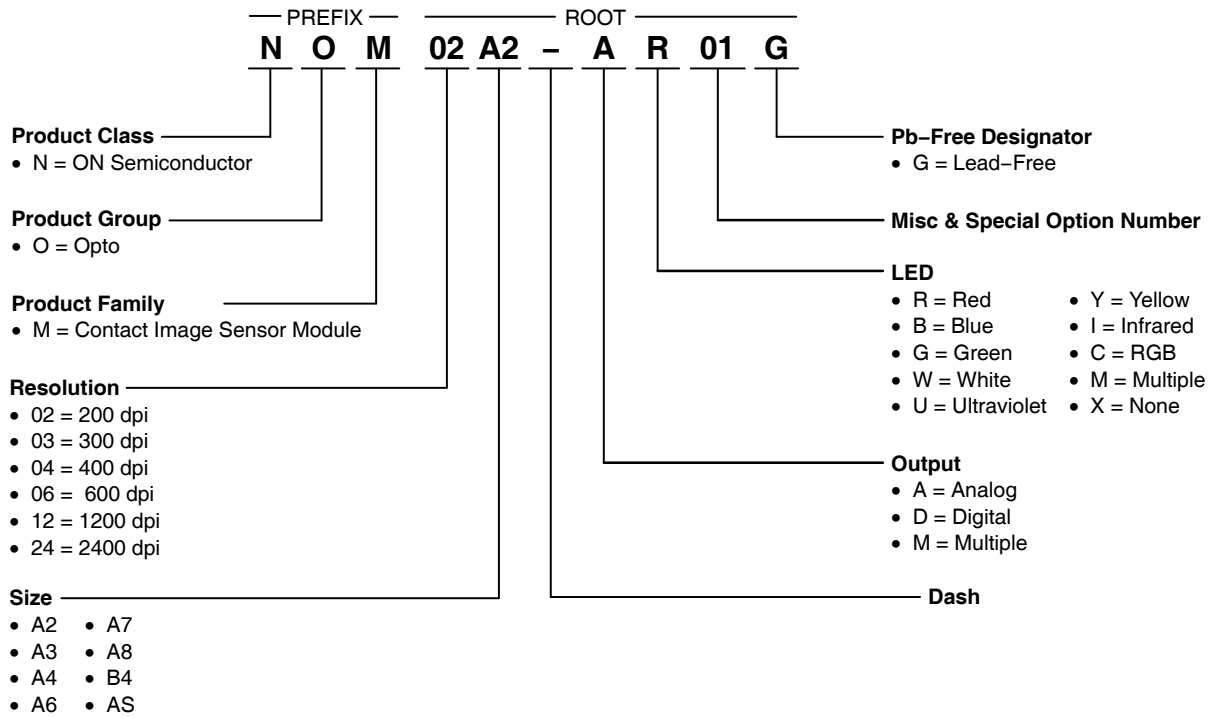
\* Optional

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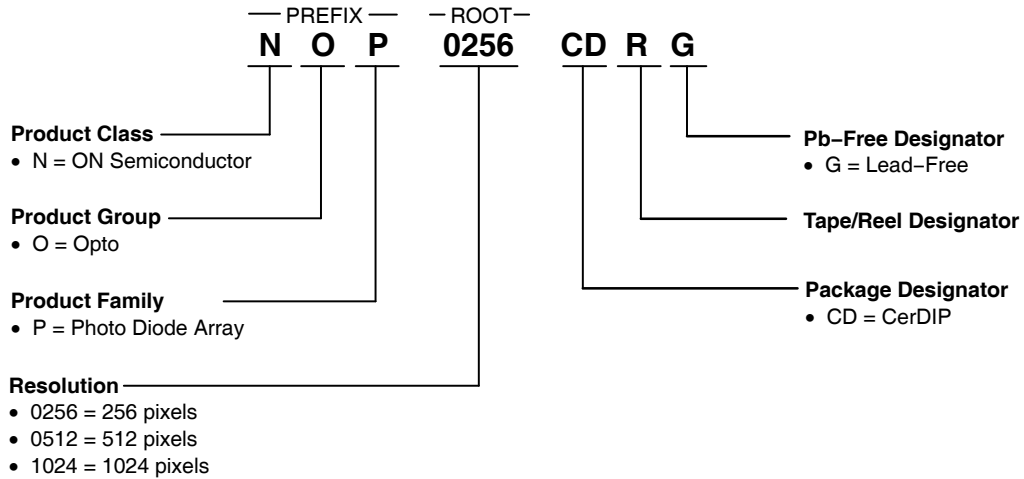
## Naming Convention for Contact Image Sensor Devices



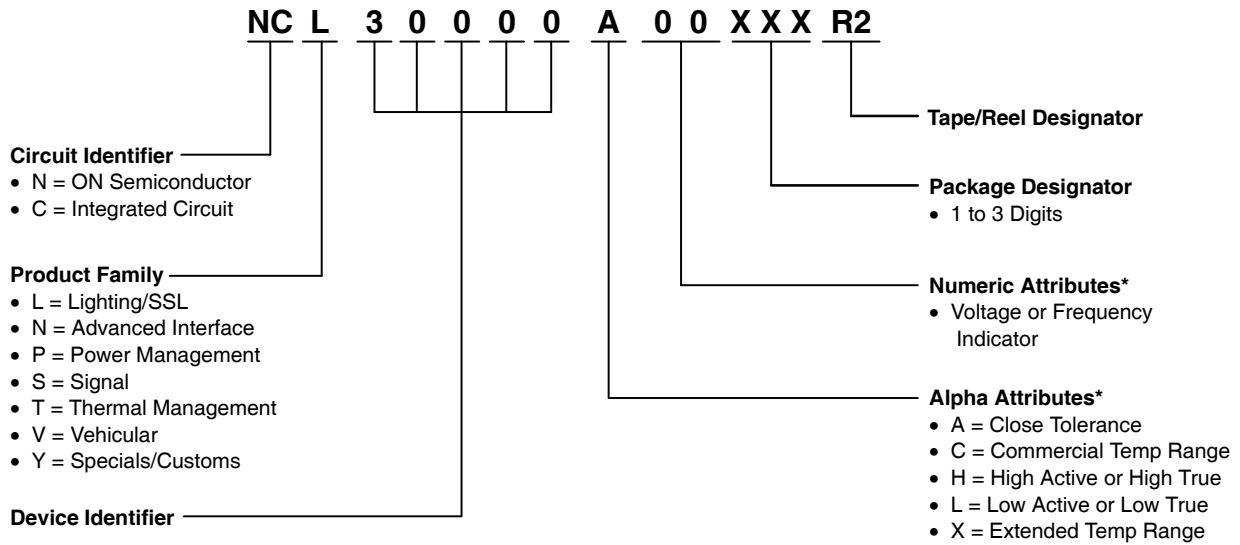
## Naming Convention for Contact Image Sensor Modules



**Naming Convention for Photo Diode Array Devices**



**Naming Convention for LED/Lighting Products**



\* Optional

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