WINSOURCE ELECTRONICS

THE DATASHEET OF

MAX9209EUM/V+T

MAXIM PRODUCT NAMING CONVENTIONS

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PROPRIETARY PARTS

Product Numbers for Proprietary Parts

Most Maxim parts use our own part numbering system which consists of a base part number followed by a suffix, plus optional additional designators.

Example:

(A) Base Part Number

The base part number identifies the product type, independent of package, temperature, and other variants. Variants such as accuracy grade are usually denoted in the suffix but sometime a variant will be assigned a new base part number.

(B) Suffix

Maxim parts have a three or four letter suffix.

- Four letter suffix

  When a part has a four-letter suffix, the first letter of the suffix denotes product grade (accuracy, speed, etc.) For example, the first "A" in MAX631ACPA indicates 5% output accuracy. The product's full data sheet details the grades that apply to that part. The remaining three letters conform to the rules for three-letter suffixes.

- Three-letter suffix

  The three letters denote *temperature range, package type*, and *number of pins*. The meanings are defined in the tables below.

  Example: MAX696CWE
  C = Operating Temperature Range C (0°C to +70°C)
  W = Package Type W (SOIC 0.300")

E = Number of Pins category E (16 pins)

Please note that suffix codes are not always consistent across different product types. Always refer to the data sheet for details and specifications.

Temperature Ranges		
A	Automotive AEC-Q100 Grade 1	-40°C to +125°C
C	Commercial	0°C to +70°C
E	Extended	-40°C to +85°C
G	Automotive AEC-Q100 Grade 2	-40°C to +105°C
I	Industrial	-20°C to +85°C
M	Military	-55°C to +125°C
T	Automotive AEC-Q100 Grade 0	-40°C to +150°C
U	Upper Commercial	0°C to +85°C

Package Type	
A	SSOP (Shrink Small Outline Package) 209 mil (14, 16, 20, 24, 28 leads); 300 mil (36 leads)
B	UCSP (Ultra-Small Chip Scale Pkg)
C	PLASTIC TO-92; TO-220
C	LQFP 1.4mm (7mm x 7mm thru 20mm x 20mm)
C	TQFP 1.0mm (7mm x 7mm thru 20mm x 20mm)
D	CERAMIC SIDEBRAZE 300 mil (8, 14, 16, 18, 20 leads); 600 mil (24, 28, 40, 48 leads)
E	QSOP (Quarter Small Outline Package)
F	CERAMIC FLATPACK
G	METAL CAN (Gold)
G	QFN (Plastic, Very Thin, Quad Flat No Lead - Punch Version) 0.9mm
H	SBGA (Super Ball Grid Array)
H	TQFP 1.0mm 5mm x 5mm (32 leads)

H	TSSOP (Thin Shrink Small Outline Package) 4.4mm (8 leads)
J	CERDIP (Ceramic Dual-Inline) (N) 300 mil (8, 14, 16, 18, 20 leads); (W) 600 mil (24, 28, 40 leads)
K	SOT 1.23mm (8 Leads)
L	LCC (Leadless Ceramic Chip Carrier) (18, 20, 28 leads)
L	FCLGA (Flip Chip Land Grid Array); THIN LGA (Thin Land Grid Array) 0.8mm
L	µDFN (Micro Dual Flat No Lead) (6, 8, 10 leads)
M	MQFP (Metric Quad Flat Pack) over 1.4mm; ED-QUAD (28mm x 28mm 160 leads)
N	PDIP (Narrow Plastic Dual-Inline) 300 mil (24, 28 leads)
P	PDIP (Plastic Dual-Inline) 300 mil (8, 14, 16, 18, 20 leads); 600 mil (24, 28, 40 leads)
Q	PLCC (Plastic Leaded Chip Carrier)
R	CERDIP (Narrow Ceramic Dual-Inline) 300 mil (24, 28 leads)
S	SOIC (Narrow Plastic Small Outline) 150 mil
T	METAL CAN (Nickel)
T	TDFN (Plastic, Very Very Thin, Dual Flat No Lead - Sawn Version) 0.9mm (6, 8, 10, 14 leads)
T	THIN QFN (Plastic, Very Very Thin, Quad Flat No Lead - Sawn Version) 0.8mm
TQ	THIN QFN (Plastic, Very Very Thin, Quad Flat No Lead - Sawn Version) 0.8mm (8 leads)
U	SOT 1.23mm (3, 4, 5, 6 leads)
U	TSSOP (Thin Shrink Small Outline Package) 4.4mm (14, 16, 20, 24, 28, 38, 56 leads); 6.1mm (48 leads)
U	µMAX (Thin Shrink Small Outline Package) 3mm x 3mm (8, 10 leads)
V	U. TQFN (Ultra Thin QFN -Plastic Ultra Thin Quad Flat No Lead - Sawn version) 0.55mm
W	SOIC (Wide Plastic Small Outline) 300 mil
W	WLP (Wafer Level Pkg)
X	CSBGA 1.4mm
X	CVBGA 1.0mm

X	SC70
Y	SIDEBRAZE (Narrow) 300 mil (24, 28 leads), ULTRA THIN LGA 0.5mm
Z	THIN SOT 1mm (5, 6, 8 leads)

Number of Pins	
A	8, 25, 46, 182
B	10, 64
C	12, 192
D	14, 128
E	16, 144
F	22, 256
G	24, 81
H	44, 126
I	28, 57
J	32, 49
K	5, 68, 265
L	9, 40
M	7, 48, 267
N	18, 56
O	42, 73
P	20, 96
Q	2, 100
R	3, 84
S	4, 80
T	6, 160
U	38, 60
V	8 (0.200" pin circle, isolated case), 30, 196
W	10 (0.230" pin circle, isolated case), 169
X	36, 45
Y	8 (0.200" pin circle, case tied to pin 4), 52

Z	10 (0.230" pin circle, case tied to pin 5), 26, 72

(C) Additional Designators (optional)

The following characters may appear after the three- or four-letter suffix. They can appear alone or in combination.

Additional Suffix Characters	
/883B	Fully compliant MIL-STD-883 Military product. Parts have their own datasheets, see: MIL-STD-883B Data Sheets.
Cxx, Gxx, or TGxx**	Custom device. Often these relate to special labeling requirements. Request a quote to learn details.
D	Indicates that the device has a Moisture Sensitivity Level (MSL) of > 1 and will therefore be drypacked before shipment.
/GG8, /GH9	Lead (SnPb) Finish for COTS Parts. Low Volume program uses /GG8, High-Volume program uses /GH9. For more information see: Lead (SnPb) Finish for COTS Parts.
/G0F	Obsolescence Mitigation (OM) Program.
/HR	High reliability products that have not been certified to MIL-STD-883.
/PR, /PR2, /PR3	Ruggedized Plastic. These are commercial parts which have a higher level of screening to appeal to customers who want something between Commercial-Off-The-Shelf (COTS) and full Military. See: Ruggedized Plastic Parts.
T, T&R, T10	Part is furnished on tape-and-reel. T or T&R indicates the standard reel quantity for the given package, usually 2.5K. T10 indicates a reel quantity of 10K.
U	Signifies cut tape.
/V	Automotive Qualified. Automotive Qualified parts follow a strict manufacturing and QA process to comply with quality levels accepted by Automotive Industry Worldwide. See Automotive /V Products.
W	"Waivered" device that does not meet data sheet specifications.
+	Indicates a lead-free (RoHS) qualified version. See our lead-free information page.*

-	Indicates the part is not qualified as lead-free (RoHS). (A lead-free version may also be available. See our lead-free information page.) *
#	Indicates an RoHS-compliant part which has an exemption for lead. See our lead-free information page.*

*If there is no +, -, or # suffix, it indicates that the part is not qualified as lead-free (RoHS). These are pre-RoHS part numbers where leaded parts were the only option. (A lead-free version may also be available.)

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MILITARY AND AEROSPACE PARTS

Product Numbers for Military and Aerospace Parts

SMD (Standard Microcircuit Drawing)**

- 5962-xxx
- 7705xxx
- 8100xxx
- 8551xxx

Mil Spec Compliant

- xxx/883B

High Reliability

- xxx/HR

Ruggedized Plastic

- xxx/PR or xxx/PR+
- xxx/PR2
- xxx/PR3

Custom Military Customer

- xxx/GG8
- xxx/GH9
- xxx/G0F (G-zero-F)
- xxx-TG1K

Vendor Item Drawing

- V62/xxx

**xxx is any alphanumeric combination.

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SECOND-SOURCED PARTS

Product Numbers for Second-Sourced Parts

Second-source products follow the most widely accepted numbering system for that particular part, rather than our own convention. This includes the original designators for product grade, temperature range, package type, and number of pins.

Maxim frequently supplies second-source products in packages or temperature ranges that are not supplied by other manufacturers. Whenever possible, these devices are given part numbers that follow the original numbering convention.

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- Obsolete Management
- Cost Control Management
- Shortage Management
- Alternative Solution
- Excess Inventory Management