



ON Semiconductor Packaging and Labeling Guidelines

Version 1.0, 31-July 2019



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Definitions



- **MPN Label:** A bar code label containing the ON Semiconductor Manufacturer Part Number of the device and other traceability information. Label dimensions are 1.625" x 4.9" (41.3mm X 124.5mm).
- **CPN Label:** A bar code label containing the Customer part number of the device and other traceability information. Label dimensions are 1.625" x 4.9" (41.3mm X 124.5mm).
- **Intermediate Box:** The box that houses the reel or tube(s) containing product. Each Intermediate Box will have an MPN Label and a CPN Label when required.
- **Shipping Label:** A bar coded label used to identify the contents of a shipping container. This also contains a "ship to" name and address. Label dimensions are 4.5" X 6.5" (114.3mm X 165.1mm)
- **Overpack Box:** The box that contains one or more Intermediate Boxes. Each Overpack box will have a Shipping Label.



Labels

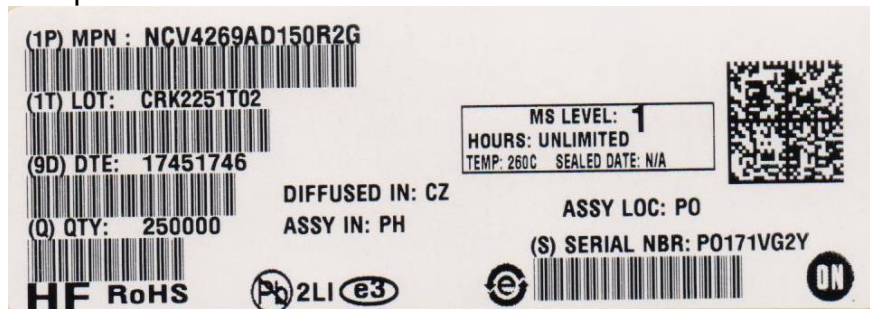
MPN Label

Each Intermediate Box will have a standard ON Semiconductor MPN Label. The label consists of the following elements:

Field Name/ Logo	Description
(1P) MPN *	Manufacturer Part Number
(1T) LOT*	Lot Number (maximum of 10 alphanumeric characters)
(9D) DTE*	Date Code(s) in "YYWW" format ("YY" denotes 2-digit year and "WW" denotes 2-digit work week; maximum of 2 date codes denoted as "YYWWYYWW")
(Q) QTY*	Quantity in container
(S) SERIAL NBR *	Internal to ON Semiconductor
ASSY LOC	Assembly Location Code (Internal to ON Semiconductor)
DIFFUSED IN:	2-digit ISO country code of the Diffused In site
ASSY IN	Assembly In - Country of Assembly - 2-digit ISO code of the assembly country
MS LEVEL	Moisture Sensitivity Level
HOURS	Time period the product can be exposed to ambient room conditions
TEMP	Maximum operating temperature of the product
SEALED DATE	Date when the moisture barrier bag is sealed
HF	Halide Free Logo - Indicates if material is Halide Free
RoHS	RoHS logo - Indicates if material complies with Europe RoHS
(Pb)	Pb Free logo - Indicates if the material is Lead Free
2LI e category	Indicates type of second level interconnect plating
	The UL Recognized Component Mark - indicates if material is Underwriter Laboratories listed device
	China RoHS logo - Indicates if material complies with China RoHS

*--Barcoded Fields

Sample of an MPN Label:



2D Barcode definition and output:

Header	Data Stream	Trailer
[]>	«RS»06«GS»1PMPN«GS»1TLOT«GS»9DDATECODE«GS»QQUANTITY«GS»SSERIALNBR«RS»«EOT»	

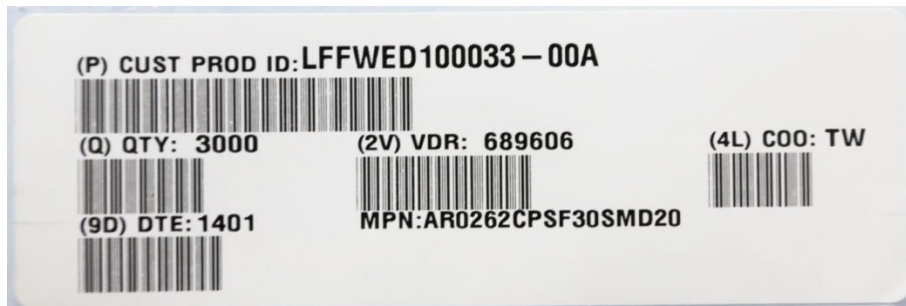


CPN Label

Each Intermediate Box will have a standard ON Semiconductor CPN Label when applicable. The label consists of the following elements:

Field Name	Description
(P) CUST PROD ID*	Customer Part Number
(Q) QTY*	Quantity in container
(9D) DTE*	Date Code(s) in "YYWW" format ("YY" denotes 2-digit year and "WW" denotes 2-digit work week; maximum of 2 date codes denoted as "YYWWYYWW")
(2V) VDR*	Vendor code
MPN	Manufacturer Part Number
(4L) COO*	Country Of Origin
*--Barcoded Fields	



Sample of a CPN Label:





Shipping Label

Each Overpack will have a standard ON Semiconductor shipping label. The label consists of the following elements:

Field Name	Description
FROM	ON Semiconductor return address
SHIP TO	Customer Name and Address
MPN	Manufacturer Part Number
FO	Factory Order Number; Line item; Factory Order Sub Job
(3S) PKG ID *	ON Semiconductor UCC code, packing list number and three digit package number
(K) TRANS ID *	Purchase Order Number
(P) CUSTOMER PROD ID *	Customer Part Number
(Q) Quantity *	Package Quantity
(13Q) Package Count	Which package out of the total number of packages in the shipment
(S) Serial # *	Packing List number + which package out of the total number of packages in the shipment
COO ASSY	Country of Origin based on Assembly, with 2 digit ISO Country Code
HF	Halide Free Logo - Indicates if material is Halide Free
RoHS	RoHS logo - Indicates if material complies with Europe RoHS
	Pb Free logo - Indicates if the material is Lead Free
2LI e category	Indicates type of second level interconnect plating
	The UL Recognized Component Mark - indicates if material is Underwriter Laboratories listed device
*--Barcoded Fields	



Sample of a Shipping Label:

FROM: ON SEMICONDUCTOR 2F #1 SCIENCE PARK EAST AVE., HONG KONG		SHIP TO: [REDACTED] [REDACTED] 1F MTL WAREHOUSE PHASE 2 BTH1, KWAI CHUNG CONTAINER TERMINAL (ARTESYN PROJECT)	
MPN: MBRD640CTT40 FO: 20340N 01 A01			
(3S) PKG ID: 689606BAX3C5001			
(K) TRANS ID: 330241			
(P) CUSTOMER 108008-040 PROD ID:			
(Q) QUANTITY: 7500		 RoHS = Y	
(13Q) PACKAGE COUNT: 1/1		COO ASSY: PH	
(S) SERIAL #: BAX3C5 + 1/1			
FACT EPSD: 18 SEP 06 LPSD: 25 SEP 06		AOVHHK	
D/C EPSD: 25 SEP 06 LPSD: 26 SEP 06			

← ON Semiconductor Internal Use Only



Packing List & Certificate of Compliance

The Overpack box will contain a packing list detailing the contents of all Overpack boxes of an order. The Packing List contains ON's standard Certificate of Compliance. The label consists of the following elements:

	Field Name	Description
Text	Ship From	ON Semiconductor Return Address
	Ship To	Customer's Name and Address
	Bill To	Customer's Billing Address
	Customer Code	ON Semiconductor designated customer identifier
	End Customer PO No.	Issuing Customer purchase order number
	S/B	Pick Bank
	F/O	Sales Order
	S/J	Sub Job (3 maximum deliveries; then prints multiple)
	L/L	Sales Delivery (3 maximum deliveries; then prints multiple)
	Purchase Order Date	Purchase order issue date
	Manufacturer P.D. Date	Manufacturer Planned Delivery Date
	CSD	Customer Schedule Date
	FOB	Freight On Board-Customer takes possession at the location specified
	Terms	Freight shipping terms (who pays for the freight)
	Ship VIA	Carrier or freight forwarder
	PKG#	Shipment package number
	Weight	Package weight in pounds and kilograms
	Waybill Number	Shipper identification number for that shipment used for tracking
	Lot Number	Product manufacturing lot number
	Quantity	Manufacturing lot quantity
Date Code	Manufacturing Dates	
Assembly Location	Manufacturing Location	
Die Origin	Die Fabrication Location	
Bar Code and Text	(2V) Vendor ID	ON Semiconductor UCC number or Customer assigned Vendor Code
	(11K) Packing List	Packing List number
	(4S) Package ID	Vendor ID and packing list number
	(K) Transit ID	Customer's purchase order number
	(P) Customer Prod ID	Customer Part Number
	(1P) Manufacturer Part Number	ON Semiconductor Part Number
	(Z) Parcels	Total box count
	(2Q) Total Weight in KG	Total package weight of shipment in kilograms (weight in pounds listed above kg)
	(Q) Quantity This Shipment	Package Quantity
(13D) Date Code	Product date code(s)	



SHIIP
ON SEMICONDUCTOR LTD C/O ON SEMI CZ SRO
1. MAJE 2230, BUDOVA M8
756 61 ROZNOV P R, CZECH REPUBLIC
TEL: +421 33 790 2276

(2V) VENDOR ID: 689606
CUSTOMER PO NO.

(11K) PACKING LIST: GVQGBF
DATE: 12 JAN 15
PAGE 1 OF 1

PO ITEM 1
CUSTOMER CODE: BBH CZ
S/B: SG10
F/O: 3621SB-05
S/J: A01
L/L: 65
PURCHASE ORDER DATE: 23 AUG 12
CUSTOMER REQ. DATE: 07 OCT 14
MANUFACTURER P.D. DATE: 19 JAN 15
CSD: 03 OCT 14

SHIIP
BILLO
TOTO

(4S) PACKAGE ID: 689606 GVQGBF
(Z) PARCELS: 1 REVISION:
(K) TRANS ID: 55139334/001
(P) CUSTOMER PROD ID: 8928913982
(1P) MANUFACTURER PART NUMBER: NCV5501DI50RKG

(Q) TOTAL WEIGHT IN KG 1.7
(Q) QTY THIS SHIPMENT: 2,500
(13D) DATE CODES
OLDEST/NEWEST: 14421442

SHIP VIA:	UPS	CHARGES:	0.00	LOT NUMBER	QUANTITY	DATE	ASSY DIS
		(WEIGHT)				CODE	LOC ORIGIN
PKG#	LBS	KGS	OVERPACK-ID				
(001)	3.74	1.70	12100A9F042122818	CD4255001	2,500	1442	MYS CZ

THIS ORDER/SALE LIMITS ACCEPTANCE TO THE TERMS HEREIN AND TO ON SEMICONDUCTOR'S STANDARD TERMS AND CONDITIONS OF SALE AVAILABLE AT WWW.ONSEMI.COM WHICH ARE INCORPORATED HEREIN. ANY ADDITIONAL OR DIFFERENT TERMS PROPOSED BY BUYER ARE REJECTED UNLESS EXPRESSLY AGREED TO IN WRITING.

CERTIFICATE OF COMPLIANCE

IT IS HEREBY CERTIFIED THAT ALL ARTICLES IN THE QUANTITIES AS CALLED FOR IN THE ABOVE PURCHASE ORDER ARE IN CONFORMANCE WITH THE REQUIREMENTS, SPECIFICATIONS AND DRAWINGS LISTED ON THAT ORDER WHICH HAVE BEEN ACCEPTED BY ON SEMICONDUCTOR IN WRITING. RECORDS SUBSTANTIATING THE ABOVE STATEMENT ARE AVAILABLE IN OUR FILES FOR INSPECTION BY AUTHORIZED PERSONNEL.

KEENAN EVANS, SENIOR VICE PRESIDENT, GLOBAL QUALITY AND RELIABILITY

EXPORT STATEMENT

THESE COMMODITIES, TECHNOLOGY OR SOFTWARE ARE SUBJECT TO ALL U.S. EXPORT CONTROL LAWS, INCLUDING BUT NOT LIMITED TO THE EXPORT ADMINISTRATION REGULATIONS. IT MAY NOT BE EXPORTED OR RE-EXPORTED TO DENIED ENTITIES OR TO ANY PROHIBITED PERSON, EMBARGOED COUNTRIES, OR FOR ACTIVITIES RELATED TO THE PROLIFERATION OF WEAPONS OF MASS DESTRUCTION, OR FOR ANY PROHIBITED USE WITHOUT PRIOR APPROVAL OF THE U.S. GOVERNMENT. DIVERSION CONTRARY TO UNITED STATES LAW IS PROHIBITED.

NOTICE TO SUBSEQUENT PURCHASER OR REPACKER

SOME OF THE ARTICLES INCLUDED HEREIN ARE IMPORTED AND CAN BE IDENTIFIED BY THE MARKING ON THEIR CONTAINERS INDICATING MANUFACTURE IN COUNTRIES OTHER THAN THE UNITED STATES. THE REQUIREMENTS OF 19 U.S.C. 1304 AND 19 CFR PART 134 PROVIDE THAT THE IMPORTED ARTICLES OR THEIR CONTAINERS MUST BE MARKED IN A CONSPICUOUS PLACE AS LEGIBLY, INDELIBLY AND PERMANENTLY AS THE NATURE OF THE ARTICLE OR CONTAINER WILL PERMIT, IN SUCH A MANNER AS TO INDICATE TO AN ULTIMATE PURCHASER IN THE UNITED STATES, THE ENGLISH NAME OF THE COUNTRY OF ORIGIN OF THE ARTICLE.

S# 000000.1600 CR CHK: N

CERTIFICATE OF COMPLIANCE

IT IS HEREBY CERTIFIED THAT ALL ARTICLES IN THE QUANTITIES AS CALLED FOR IN THE ABOVE PURCHASE ORDER ARE IN CONFORMANCE WITH THE REQUIREMENTS, SPECIFICATIONS AND DRAWINGS LISTED ON THAT ORDER WHICH HAVE BEEN ACCEPTED BY ON SEMICONDUCTOR IN WRITING. RECORDS SUBSTANTIATING THE ABOVE STATEMENT ARE AVAILABLE IN OUR FILES FOR INSPECTION BY AUTHORIZED PERSONNEL.

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Packaging and Graphics

Shipments from ON Semiconductor will follow ON's standard packaging process. The Overpack box may contain multiple Intermediate boxes of a single product. For each line item on an order that is shipped, there will be at least one overpack box [more if the quantity of intermediate boxes exceeds the capacity of the overpack box]. Any overpack box will contain one and only one part number, but may contain varying lots and date codes based on the content of the Intermediate Boxes.





Integration

In Q4-2019, ON will integrate Quantenna Communications and convert inventory. On the integration go-live date, ON Semiconductor will be converting the Intermediate Box Packaging to ON Standards with ON Logos and Graphics. The label changes will be effective on October 28th, 2019, while the graphics on the intermediate boxes will gradually change to the ON Semiconductor standard.

Sample ON Intermediate Boxes showing Graphics:



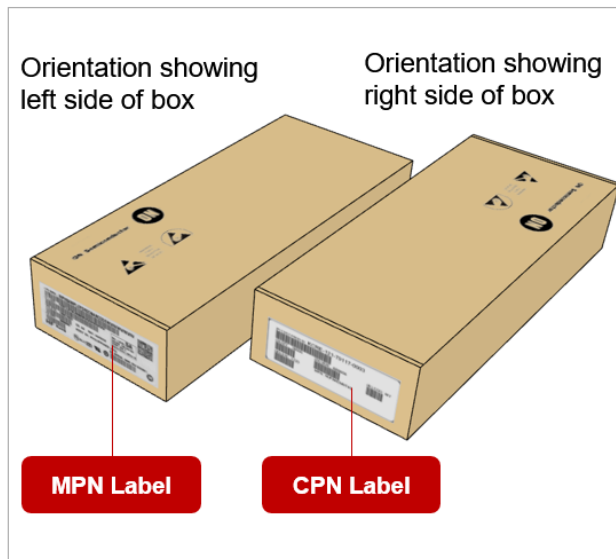


Tray packaging and labeling



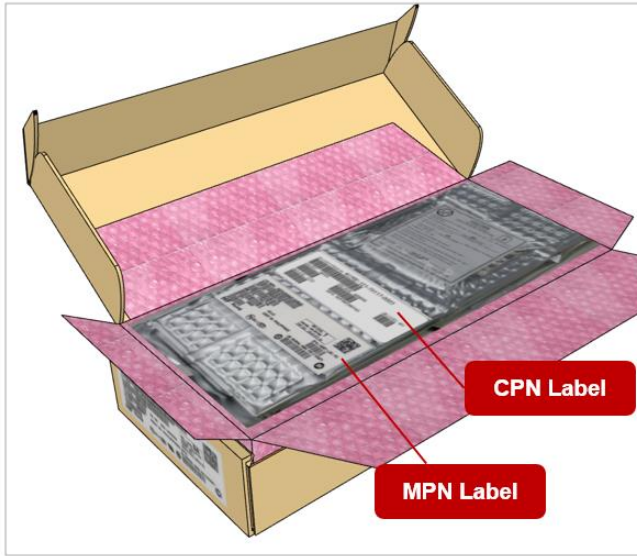
a) Overpack

Labeling:
- Shipping Label
- Packing List



b) Intermediate box

Labeling:
- MPN Label (on left side of box)
- CPN Label (If applicable, on right side of box)



c) Tray in intermediate box with ESD-safe small bubble wrap

Labeling:

- MPN Label
- CPN Label (if applicable)



d) Tray in vacuum pack

Labeling:

- MPN Label
- CPN Label (if applicable)



Asia Hub Packing List

The Hub Packing List contains a consolidated list of all shipments to a specific customer location that have been consolidated at the ON Semiconductor Hub prior to final customer shipment. The Hub Packing List consists of the following elements:

Field Name	Description
DO No:	ON Semiconductor Internal Delivery Order Number
From	Ship from company name, address and phone number
Ship To	Ship-To Customer name and address
Date	Generation date of the packing list
Ship Via	Method of shipment
Way Bill No	Air-waybill No. or "LOCAL" for local trucking
Note	Shipping Notes
Invoice	Invoice numbers in the packing list
Total Volumetric Weight	Total volumetric weight (in kilograms)
Total Gross Weight	Total gross weight of the packing list (in kilograms)
Total Net Weight	Total net weight of the devices in the packing list (in kilograms)
Total Shipment Boxes	Total count of boxes for the shipment
Box Sub-Total	Sub-total count of boxes for each invoice
PO No	Purchase Order Number of each invoice
Invoice No	Invoice number
MPN	Manufacturer Part Number (up to 29 characters)
CPN	Customer Part Number (up to 40 characters)
Quantity (PCS) Sub Total	Total quantity for each invoice
Dimensions (L)(W)(H) cm	Dimensions of the overpack for the invoice
Box Volume (cm3)	Cubic centimeters of the overpacks for the invoice
Net WT	Net weight of the invoice



Sample Asia Hub Packing List:

DO No.:	ON Semiconductor	Page 1 Of 1			
Packing List					
From:	Date				
	Ship Via:				
	Way Bill No:				
Ship To:	Note:				
Invoice:					
Total Volumetric Weight:		Total Net Weight:			
Total Gross Weight:		Total Shipment Boxes::			
Box Sub-Total	Description				
	PO No.	MPN	Quantity(PCS)	Dimension(L)(W)(H)cm	Net WT
	Invoice No.	CPN	Sub-Total	Box Volume (cm³)	
End of list					