

PACKAGING INFORMATION

Orderable part number	Status (1)	Material type (2)	Package Pins	Package qty Carrier	RoHS (3)	Lead finish/ Ball material (4)	MSL rating/ Peak reflow (5)	Op temp (°C)	Part marking (6)
F28384DPTPQR	Active	Production	HLQFP (PTP) 176	200 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28384DPTPQ
F28384DPTPQR.A	Active	Production	HLQFP (PTP) 176	200 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28384DPTPQ
F28384DPTPQR.B	Active	Production	HLQFP (PTP) 176	200 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28384DPTPQ
F28384DPTPS	Active	Production	HLQFP (PTP) 176	40 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28384DPTPS
F28384DPTPS.A	Active	Production	HLQFP (PTP) 176	40 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28384DPTPS
F28384DPTPS.B	Active	Production	HLQFP (PTP) 176	40 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28384DPTPS
F28384DZWTQR	Active	Production	NFBGA (ZWT) 337	1000 LARGE T&R	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28384DZWTQ
F28384DZWTQR.A	Active	Production	NFBGA (ZWT) 337	1000 LARGE T&R	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28384DZWTQ
F28384DZWTQR.B	Active	Production	NFBGA (ZWT) 337	1000 LARGE T&R	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28384DZWTQ
F28384DZWTS	Active	Production	NFBGA (ZWT) 337	90 JEDEC TRAY (10+1)	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28384DZWTS
F28384DZWTS.A	Active	Production	NFBGA (ZWT) 337	90 JEDEC TRAY (10+1)	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28384DZWTS
F28384DZWTS.B	Active	Production	NFBGA (ZWT) 337	90 JEDEC TRAY (10+1)	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28384DZWTS
F28384SPTPQR	Active	Production	HLQFP (PTP) 176	200 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28384SPTPQ
F28384SPTPQR.A	Active	Production	HLQFP (PTP) 176	200 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28384SPTPQ
F28384SPTPQR.B	Active	Production	HLQFP (PTP) 176	200 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28384SPTPQ
F28384SPTPS	Active	Production	HLQFP (PTP) 176	40 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28384SPTPS
F28384SPTPS.A	Active	Production	HLQFP (PTP) 176	40 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28384SPTPS
F28384SPTPS.B	Active	Production	HLQFP (PTP) 176	40 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28384SPTPS
F28384SZWTS	Active	Production	NFBGA (ZWT) 337	90 JEDEC TRAY (10+1)	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28384SZWTS
F28384SZWTS.A	Active	Production	NFBGA (ZWT) 337	90 JEDEC TRAY (10+1)	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28384SZWTS

Orderable part number	Status (1)	Material type (2)	Package Pins	Package qty Carrier	RoHS (3)	Lead finish/ Ball material (4)	MSL rating/ Peak reflow (5)	Op temp (°C)	Part marking (6)
F28384SZWTS.B	Active	Production	NFBGA (ZWT) 337	90 JEDEC TRAY (10+1)	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28384SZWTS
F28386DPTPQ	Active	Production	HLQFP (PTP) 176	40 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28386DPTPQ
F28386DPTPQ.A	Active	Production	HLQFP (PTP) 176	40 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28386DPTPQ
F28386DPTPQ.B	Active	Production	HLQFP (PTP) 176	40 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28386DPTPQ
F28386DPTPQR	Active	Production	HLQFP (PTP) 176	200 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28386DPTPQ
F28386DPTPQR.A	Active	Production	HLQFP (PTP) 176	200 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28386DPTPQ
F28386DPTPQR.B	Active	Production	HLQFP (PTP) 176	200 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28386DPTPQ
F28386DPTPS	Active	Production	HLQFP (PTP) 176	40 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28386DPTPS
F28386DPTPS.A	Active	Production	HLQFP (PTP) 176	40 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28386DPTPS
F28386DPTPS.B	Active	Production	HLQFP (PTP) 176	40 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28386DPTPS
F28386DZWTQ	Active	Production	NFBGA (ZWT) 337	90 JEDEC TRAY (10+1)	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28386DZWTQ
F28386DZWTQ.A	Active	Production	NFBGA (ZWT) 337	90 JEDEC TRAY (10+1)	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28386DZWTQ
F28386DZWTQ.B	Active	Production	NFBGA (ZWT) 337	90 JEDEC TRAY (10+1)	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28386DZWTQ
F28386DZWTQR	Active	Production	NFBGA (ZWT) 337	1000 LARGE T&R	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28386DZWTQ
F28386DZWTQR.A	Active	Production	NFBGA (ZWT) 337	1000 LARGE T&R	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28386DZWTQ
F28386DZWTQR.B	Active	Production	NFBGA (ZWT) 337	1000 LARGE T&R	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28386DZWTQ
F28386DZWTS	Active	Production	NFBGA (ZWT) 337	90 JEDEC TRAY (10+1)	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28386DZWTS
F28386DZWTS.A	Active	Production	NFBGA (ZWT) 337	90 JEDEC TRAY (10+1)	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28386DZWTS
F28386DZWTS.B	Active	Production	NFBGA (ZWT) 337	90 JEDEC TRAY (10+1)	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28386DZWTS
F28386SPTPQR	Active	Production	HLQFP (PTP) 176	200 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28386SPTPQ
F28386SPTPQR.A	Active	Production	HLQFP (PTP) 176	200 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28386SPTPQ

Orderable part number	Status (1)	Material type (2)	Package Pins	Package qty Carrier	RoHS (3)	Lead finish/ Ball material (4)	MSL rating/ Peak reflow (5)	Op temp (°C)	Part marking (6)
F28386SPTPQR.B	Active	Production	HLQFP (PTP) 176	200 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28386SPTPQ
F28386SPTPS	Active	Production	HLQFP (PTP) 176	40 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28386SPTPS
F28386SPTPS.A	Active	Production	HLQFP (PTP) 176	40 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28386SPTPS
F28386SPTPS.B	Active	Production	HLQFP (PTP) 176	40 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28386SPTPS
F28386SZWTS	Active	Production	NFBGA (ZWT) 337	90 JEDEC TRAY (10+1)	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28386SZWTS
F28386SZWTS.A	Active	Production	NFBGA (ZWT) 337	90 JEDEC TRAY (10+1)	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28386SZWTS
F28386SZWTS.B	Active	Production	NFBGA (ZWT) 337	90 JEDEC TRAY (10+1)	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28386SZWTS
F28388DPTPS	Active	Production	HLQFP (PTP) 176	40 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28388DPTPS
F28388DPTPS.A	Active	Production	HLQFP (PTP) 176	40 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28388DPTPS
F28388DPTPS.B	Active	Production	HLQFP (PTP) 176	40 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28388DPTPS
F28388DPTPSR	Active	Production	HLQFP (PTP) 176	200 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28388DPTPS
F28388DPTPSR.A	Active	Production	HLQFP (PTP) 176	200 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28388DPTPS
F28388DPTPSR.B	Active	Production	HLQFP (PTP) 176	200 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28388DPTPS
F28388DZWTS	Active	Production	NFBGA (ZWT) 337	90 JEDEC TRAY (10+1)	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28388DZWTS
F28388DZWTS.A	Active	Production	NFBGA (ZWT) 337	90 JEDEC TRAY (10+1)	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28388DZWTS
F28388DZWTS.B	Active	Production	NFBGA (ZWT) 337	90 JEDEC TRAY (10+1)	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28388DZWTS
F28388DZWTSR	Active	Production	NFBGA (ZWT) 337	1000 LARGE T&R	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28388DZWTS
F28388DZWTSR.A	Active	Production	NFBGA (ZWT) 337	1000 LARGE T&R	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28388DZWTS
F28388DZWTSR.B	Active	Production	NFBGA (ZWT) 337	1000 LARGE T&R	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28388DZWTS
F28388SPTPS	Active	Production	HLQFP (PTP) 176	40 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28388SPTPS

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F28388SPTPS.A	Active	Production	HLQFP (PTP) 176	40 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28388SPTPS
F28388SPTPS.B	Active	Production	HLQFP (PTP) 176	40 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28388SPTPS
F28388SPTPSR	Active	Production	HLQFP (PTP) 176	200 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28388SPTPS
F28388SPTPSR.A	Active	Production	HLQFP (PTP) 176	200 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28388SPTPS
F28388SPTPSR.B	Active	Production	HLQFP (PTP) 176	200 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28388SPTPS
F28388SZWTS	Active	Production	NFBGA (ZWT) 337	90 JEDEC TRAY (10+1)	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28388SZWTS
F28388SZWTS.A	Active	Production	NFBGA (ZWT) 337	90 JEDEC TRAY (10+1)	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28388SZWTS
F28388SZWTS.B	Active	Production	NFBGA (ZWT) 337	90 JEDEC TRAY (10+1)	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28388SZWTS
F28388SZWTSR	Active	Production	NFBGA (ZWT) 337	1000 LARGE T&R	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28388SZWTS
F28388SZWTSR.A	Active	Production	NFBGA (ZWT) 337	1000 LARGE T&R	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28388SZWTS
F28388SZWTSR.B	Active	Production	NFBGA (ZWT) 337	1000 LARGE T&R	Yes	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28388SZWTS

⁽¹⁾ **Status:** For more details on status, see our [product life cycle](#).

⁽²⁾ **Material type:** When designated, preproduction parts are prototypes/experimental devices, and are not yet approved or released for full production. Testing and final process, including without limitation quality assurance, reliability performance testing, and/or process qualification, may not yet be complete, and this item is subject to further changes or possible discontinuation. If available for ordering, purchases will be subject to an additional waiver at checkout, and are intended for early internal evaluation purposes only. These items are sold without warranties of any kind.

⁽³⁾ **RoHS values:** Yes, No, RoHS Exempt. See the [TI RoHS Statement](#) for additional information and value definition.

⁽⁴⁾ **Lead finish/Ball material:** Parts may have multiple material finish options. Finish options are separated by a vertical ruled line. Lead finish/Ball material values may wrap to two lines if the finish value exceeds the maximum column width.

⁽⁵⁾ **MSL rating/Peak reflow:** The moisture sensitivity level ratings and peak solder (reflow) temperatures. In the event that a part has multiple moisture sensitivity ratings, only the lowest level per JEDEC standards is shown. Refer to the shipping label for the actual reflow temperature that will be used to mount the part to the printed circuit board.

⁽⁶⁾ **Part marking:** There may be an additional marking, which relates to the logo, the lot trace code information, or the environmental category of the part.

Multiple part markings will be inside parentheses. Only one part marking contained in parentheses and separated by a "~" will appear on a part. If a line is indented then it is a continuation of the previous line and the two combined represent the entire part marking for that device.

Important Information and Disclaimer: The information provided on this page represents TI's knowledge and belief as of the date that it is provided. TI bases its knowledge and belief on information provided by third parties, and makes no representation or warranty as to the accuracy of such information. Efforts are underway to better integrate information from third parties. TI has taken and continues to take reasonable steps to provide representative and accurate information but may not have conducted destructive testing or chemical analysis on incoming materials and chemicals. TI and TI suppliers consider certain information to be proprietary, and thus CAS numbers and other limited information may not be available for release.

In no event shall TI's liability arising out of such information exceed the total purchase price of the TI part(s) at issue in this document sold by TI to Customer on an annual basis.

OTHER QUALIFIED VERSIONS OF TMS320F28384D, TMS320F28384D-Q1, TMS320F28384S, TMS320F28384S-Q1, TMS320F28386D, TMS320F28386D-Q1, TMS320F28386S, TMS320F28386S-Q1 :

- Catalog : [TMS320F28384D](#), [TMS320F28384S](#), [TMS320F28386D](#), [TMS320F28386S](#)
- Automotive : [TMS320F28384D-Q1](#), [TMS320F28384S-Q1](#), [TMS320F28386D-Q1](#), [TMS320F28386S-Q1](#)

NOTE: Qualified Version Definitions:

- Catalog - TI's standard catalog product
- Automotive - Q100 devices qualified for high-reliability automotive applications targeting zero defects