

PACKAGING INFORMATION

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead finish/ Ball material (6)	MSL Peak Temp (3)	Op Temp (°C)	Device Marking (4/5)	Samples
F28384DPTPQR	ACTIVE	HLQFP	PTP	176	200	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28384DPTPQ	Samples
F28384DPTPS	ACTIVE	HLQFP	PTP	176	40	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28384DPTPS	Samples
F28384DZWTQR	ACTIVE	NFBGA	ZWT	337	1000	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28384DZWTQ	Samples
F28384DZWTS	ACTIVE	NFBGA	ZWT	337	90	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28384DZWTS	Samples
F28384SPTPQR	ACTIVE	HLQFP	PTP	176	200	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28384SPTPQ	Samples
F28384SPTPS	ACTIVE	HLQFP	PTP	176	40	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28384SPTPS	Samples
F28384SZWTS	ACTIVE	NFBGA	ZWT	337	90	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28384SZWTS	Samples
F28386DPTPQ	ACTIVE	HLQFP	PTP	176	40	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28386DPTPQ	Samples
F28386DPTPQR	ACTIVE	HLQFP	PTP	176	200	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28386DPTPQ	Samples
F28386DPTPS	ACTIVE	HLQFP	PTP	176	40	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28386DPTPS	Samples
F28386DZWTQ	ACTIVE	NFBGA	ZWT	337	90	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28386DZWTQ	Samples
F28386DZWTQR	ACTIVE	NFBGA	ZWT	337	1000	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28386DZWTQ	Samples
F28386DZWTS	ACTIVE	NFBGA	ZWT	337	90	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28386DZWTS	Samples
F28386SPTPQR	ACTIVE	HLQFP	PTP	176	200	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28386SPTPQ	Samples
F28386SPTPS	ACTIVE	HLQFP	PTP	176	40	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28386SPTPS	Samples
F28386SZWTS	ACTIVE	NFBGA	ZWT	337	90	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28386SZWTS	Samples
F28388DPTPS	ACTIVE	HLQFP	PTP	176	40	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28388DPTPS	Samples
F28388DPTPSR	ACTIVE	HLQFP	PTP	176	200	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28388DPTPS	Samples
F28388DZWTS	ACTIVE	NFBGA	ZWT	337	90	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28388DZWTS	Samples
F28388DZWTSR	ACTIVE	NFBGA	ZWT	337	1000	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28388DZWTS	Samples

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F28388SPTPS	ACTIVE	HLQFP	PTP	176	40	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28388SPTPS	Samples
F28388SPTPSR	ACTIVE	HLQFP	PTP	176	200	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28388SPTPS	Samples
F28388SZWTS	ACTIVE	NFBGA	ZWT	337	90	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28388SZWTS	Samples
F28388SZWTSR	ACTIVE	NFBGA	ZWT	337	1000	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28388SZWTS	Samples
F28P650DH6NMRR	ACTIVE	NFBGA	NMR	169	1000	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28P650DH6 NMR	Samples
F28P650DH6PTP	ACTIVE	HLQFP	PTP	176	40	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28P650DH6 PTP	Samples
F28P650DH6ZEJR	ACTIVE	NFBGA	ZEJ	256	1000	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28P650DH6 ZEJ	Samples
F28P650DK6NMRR	ACTIVE	NFBGA	NMR	169	1000	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28P650DK6 NMR	Samples
F28P650DK6PTP	ACTIVE	HLQFP	PTP	176	40	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28P650DK6 PTP	Samples
F28P650DK6PZP	ACTIVE	HTQFP	PZP	100	90	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28P650DK6 PZP	Samples
F28P650DK6ZEJR	ACTIVE	NFBGA	ZEJ	256	1000	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28P650DK6 ZEJ	Samples
F28P650DK7NMRR	ACTIVE	NFBGA	NMR	169	1000	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28P650DK7 NMR	Samples
F28P650DK7PTP	ACTIVE	HLQFP	PTP	176	40	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28P650DK7 PTP	Samples
F28P650DK8NMRR	ACTIVE	NFBGA	NMR	169	1000	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28P650DK8 NMR	Samples
F28P650DK8PTP	ACTIVE	HLQFP	PTP	176	40	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28P650DK8 PTP	Samples
F28P650DK8ZEJR	ACTIVE	NFBGA	ZEJ	256	1000	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28P650DK8 ZEJ	Samples
F28P650DK9NMR	ACTIVE	NFBGA	NMR	169	260	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28P650DK9 NMR	Samples
F28P650DK9NMRR	ACTIVE	NFBGA	NMR	169	1000	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28P650DK9 NMR	Samples

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead finish/ Ball material (6)	MSL Peak Temp (3)	Op Temp (°C)	Device Marking (4/5)	Samples
F28P650DK9PTP	ACTIVE	HLQFP	PTP	176	40	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28P650DK9 PTP	Samples
F28P650DK9ZEJ	ACTIVE	NFBGA	ZEJ	256	119	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28P650DK9 ZEJ	Samples
F28P650DK9ZEJR	ACTIVE	NFBGA	ZEJ	256	1000	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28P650DK9 ZEJ	Samples
F28P650SH6NMRR	ACTIVE	NFBGA	NMR	169	1000	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28P650SH6 NMR	Samples
F28P650SH6PTP	ACTIVE	HLQFP	PTP	176	40	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28P650SH6 PTP	Samples
F28P650SH7NMRR	ACTIVE	NFBGA	NMR	169	1000	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28P650SH7 NMR	Samples
F28P650SH7PTP	ACTIVE	HLQFP	PTP	176	40	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28P650SH7 PTP	Samples
F28P650SH7ZEJR	ACTIVE	NFBGA	ZEJ	256	1000	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28P650SH7 ZEJ	Samples
F28P650SK6NMRR	ACTIVE	NFBGA	NMR	169	1000	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28P650SK6 NMR	Samples
F28P650SK6PTP	ACTIVE	HLQFP	PTP	176	40	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28P650SK6 PTP	Samples
F28P650SK7NMRR	ACTIVE	NFBGA	NMR	169	1000	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28P650SK7 NMR	Samples
F28P650SK7PTP	ACTIVE	HLQFP	PTP	176	40	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28P650SK7 PTP	Samples
F28P659DK8PTPQ1	ACTIVE	HLQFP	PTP	176	40	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28P659DK8 PTPQ	Samples
F28P659DK8PZPQ1	ACTIVE	HTQFP	PZP	100	90	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28P659DK8 PZPQ	Samples
F28P659DK8PZPRQ1	ACTIVE	HTQFP	PZP	100	1000	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F28P659DK8 PZPQ	Samples
F28P659DK8ZEJQ1	ACTIVE	NFBGA	ZEJ	256	119	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28P659DK8 ZEJQ	Samples
F28P659DK8ZEJRQ1	ACTIVE	NFBGA	ZEJ	256	1000	RoHS & Green	SNAGCU	Level-3-260C-168 HR	-40 to 125	F28P659DK8 ZEJQ	Samples
XF28P650DK6PZP	ACTIVE	HTQFP	PZP	100	90	TBD	Call TI	Call TI	-40 to 125		Samples

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead finish/ Ball material (6)	MSL Peak Temp (3)	Op Temp (°C)	Device Marking (4/5)	Samples
XF28P650DK9PTP	ACTIVE	HLQFP	PTP	176	40	TBD	Call TI	Call TI	-40 to 125		Samples
XF28P650DK9ZEJ	ACTIVE	NFBGA	ZEJ	256	119	TBD	Call TI	Call TI	-40 to 125		Samples
XF28P659DK8PTPQ1	ACTIVE	HLQFP	PTP	176	40	TBD	Call TI	Call TI	-40 to 125		Samples
XF28P659DK8PZPRQ1	ACTIVE	HTQFP	PZP	100	1000	TBD	Call TI	Call TI	-40 to 125		Samples
XF28P659DK8ZEJRQ1	ACTIVE	NFBGA	ZEJ	256	1000	TBD	Call TI	Call TI	-40 to 125		Samples

(1) The marketing status values are defined as follows:

ACTIVE: Product device recommended for new designs.

LIFEBUY: TI has announced that the device will be discontinued, and a lifetime-buy period is in effect.

NRND: Not recommended for new designs. Device is in production to support existing customers, but TI does not recommend using this part in a new design.

PREVIEW: Device has been announced but is not in production. Samples may or may not be available.

OBSELETE: TI has discontinued the production of the device.

(2) **RoHS:** TI defines "RoHS" to mean semiconductor products that are compliant with the current EU RoHS requirements for all 10 RoHS substances, including the requirement that RoHS substance do not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, "RoHS" products are suitable for use in specified lead-free processes. TI may reference these types of products as "Pb-Free".

RoHS Exempt: TI defines "RoHS Exempt" to mean products that contain lead but are compliant with EU RoHS pursuant to a specific EU RoHS exemption.

Green: TI defines "Green" to mean the content of Chlorine (Cl) and Bromine (Br) based flame retardants meet JS709B low halogen requirements of <=1000ppm threshold. Antimony trioxide based flame retardants must also meet the <=1000ppm threshold requirement.

(3) MSL, Peak Temp. - The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

(4) There may be additional marking, which relates to the logo, the lot trace code information, or the environmental category on the device.

(5) Multiple Device Markings will be inside parentheses. Only one Device Marking contained in parentheses and separated by a "~" will appear on a device. If a line is indented then it is a continuation of the previous line and the two combined represent the entire Device Marking for that device.

(6) Lead finish/Ball material - Orderable Devices 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.

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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