

**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
F280040CPMQR	ACTIVE	LQFP	PM	64	1000	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280040CPMQ	<a href="#">Samples</a>
F280040PMQR	ACTIVE	LQFP	PM	64	1000	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280040PMQ	<a href="#">Samples</a>
F280041CPMS	ACTIVE	LQFP	PM	64	160	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280041CPMS	<a href="#">Samples</a>
F280041CPZQR	ACTIVE	LQFP	PZ	100	1000	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280041CPZQ	<a href="#">Samples</a>
F280041CPZS	ACTIVE	LQFP	PZ	100	90	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280041CPZS	<a href="#">Samples</a>
F280041CRSHSR	ACTIVE	VQFN	RSH	56	2500	RoHS & Green	Call TI   NIPDAU	Level-3-260C-168 HR	-40 to 125	F280041C RSHS	<a href="#">Samples</a>
F280041PMS	ACTIVE	LQFP	PM	64	160	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280041PMS	<a href="#">Samples</a>
F280041PMSR	ACTIVE	LQFP	PM	64	1000	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280041PMS	<a href="#">Samples</a>
F280041PZQR	ACTIVE	LQFP	PZ	100	1000	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280041PZQ	<a href="#">Samples</a>
F280041PZS	ACTIVE	LQFP	PZ	100	90	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280041PZS	<a href="#">Samples</a>
F280041PZSR	ACTIVE	LQFP	PZ	100	1000	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280041PZS	<a href="#">Samples</a>
F280041RSHSR	ACTIVE	VQFN	RSH	56	2500	RoHS & Green	Call TI   NIPDAU	Level-3-260C-168 HR	-40 to 125	F280041 RSHS	<a href="#">Samples</a>
F280045PMS	ACTIVE	LQFP	PM	64	160	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280045PMS	<a href="#">Samples</a>
F280045PMSR	ACTIVE	LQFP	PM	64	1000	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280045PMS	<a href="#">Samples</a>
F280045PZS	ACTIVE	LQFP	PZ	100	90	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280045PZS	<a href="#">Samples</a>
F280045PZSR	ACTIVE	LQFP	PZ	100	1000	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280045PZS	<a href="#">Samples</a>
F280045RSHSR	ACTIVE	VQFN	RSH	56	2500	RoHS & Green	Call TI   NIPDAU	Level-3-260C-168 HR	-40 to 125	F280045 RSHS	<a href="#">Samples</a>
F280048CPMQR	ACTIVE	LQFP	PM	64	1000	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280048CPMQ	<a href="#">Samples</a>
F280048PMQR	ACTIVE	LQFP	PM	64	1000	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280048PMQ	<a href="#">Samples</a>

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
F280049CPMS	ACTIVE	LQFP	PM	64	160	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280049CPMS	<a href="#">Samples</a>
F280049CPMSR	ACTIVE	LQFP	PM	64	1000	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280049CPMS	<a href="#">Samples</a>
F280049CPZQR	ACTIVE	LQFP	PZ	100	1000	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280049CPZQ	<a href="#">Samples</a>
F280049CPZS	ACTIVE	LQFP	PZ	100	90	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280049CPZS	<a href="#">Samples</a>
F280049CRSHSR	ACTIVE	VQFN	RSH	56	2500	RoHS & Green	Call TI   NIPDAU	Level-3-260C-168 HR	-40 to 125	F280049C RSHS	<a href="#">Samples</a>
F280049PMS	ACTIVE	LQFP	PM	64	160	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280049PMS	<a href="#">Samples</a>
F280049PMSR	ACTIVE	LQFP	PM	64	1000	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280049PMS	<a href="#">Samples</a>
F280049PZQ	ACTIVE	LQFP	PZ	100	90	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280049PZQ	<a href="#">Samples</a>
F280049PZQR	ACTIVE	LQFP	PZ	100	1000	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280049PZQ	<a href="#">Samples</a>
F280049PZS	ACTIVE	LQFP	PZ	100	90	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280049PZS	<a href="#">Samples</a>
F280049PZSR	ACTIVE	LQFP	PZ	100	1000	RoHS & Green	NIPDAU	Level-3-260C-168 HR	-40 to 125	F280049PZS	<a href="#">Samples</a>
F280049RSHSR	ACTIVE	VQFN	RSH	56	2500	RoHS & Green	Call TI   NIPDAU	Level-3-260C-168 HR	-40 to 125	F280049 RSHS	<a href="#">Samples</a>

(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.

**OBSOLETE:** 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.

**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 TMS320F280041, TMS320F280041-Q1, TMS320F280041C, TMS320F280041C-Q1, TMS320F280049, TMS320F280049-Q1, TMS320F280049C, TMS320F280049C-Q1 :**

● Catalog : [TMS320F280041](#), [TMS320F280041C](#), [TMS320F280049](#), [TMS320F280049C](#)

● Automotive : [TMS320F280041-Q1](#), [TMS320F280041C-Q1](#), [TMS320F280049-Q1](#), [TMS320F280049C-Q1](#)

NOTE: Qualified Version Definitions:

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