

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)
MSP430F67451PEU	Active	Production	LQFP (PEU) 128	72 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67451
MSP430F67451PEU.Z	Active	Production	LQFP (PEU) 128	72 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67451
MSP430F67451PZ	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67451
MSP430F67451PZ.Z	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67451
MSP430F67461PEU	Active	Production	LQFP (PEU) 128	72 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67461
MSP430F67461PZ	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67461
MSP430F67471PZ	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67471
MSP430F67471PZ.Z	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67471
MSP430F67471PZR	Active	Production	LQFP (PZ) 100	1000 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67471
MSP430F67471PZR.Z	Active	Production	LQFP (PZ) 100	1000 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67471
MSP430F67481PEU	Active	Production	LQFP (PEU) 128	72 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67481
MSP430F67481PZ	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67481
MSP430F67491PEU	Active	Production	LQFP (PEU) 128	72 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67491
MSP430F67491PZ	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67491
MSP430F67491PZ.Z	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67491
MSP430F67651PEU	Active	Production	LQFP (PEU) 128	72 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67651
MSP430F67651PZ	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67651
MSP430F67651PZR	Active	Production	LQFP (PZ) 100	1000 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67651

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MSP430F67651IPZR.Z	Active	Production	LQFP (PZ) 100	1000 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67651
MSP430F67661IPEU	Active	Production	LQFP (PEU) 128	72 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67661
MSP430F67661IPZ	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67661
MSP430F67661IPZ.Z	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67661
MSP430F67671IPEU	Active	Production	LQFP (PEU) 128	72 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67671
MSP430F67671IPZ	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67671
MSP430F67671IPZ.Z	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67671
MSP430F67681IPEU	Active	Production	LQFP (PEU) 128	72 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67681
MSP430F67681IPZ	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67681
MSP430F67681IPZ.Z	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67681
MSP430F67681IPZR	Active	Production	LQFP (PZ) 100	1000 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67681
MSP430F67681IPZR.Z	Active	Production	LQFP (PZ) 100	1000 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67681
MSP430F67691IPEU	Active	Production	LQFP (PEU) 128	72 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67691
MSP430F67691IPZ	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67691
MSP430F67691IPZ.Z	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67691
MSP430F67691IPZR	Active	Production	LQFP (PZ) 100	1000 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67691
MSP430F67691IPZR.Z	Active	Production	LQFP (PZ) 100	1000 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67691
MSP430F67751IPEU	Active	Production	LQFP (PEU) 128	72 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67751
MSP430F67751IPZ	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67751
MSP430F67751IPZ.Z	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67751

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MSP430F67751IPZR	Active	Production	LQFP (PZ) 100	1000 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67751
MSP430F67751IPZR.Z	Active	Production	LQFP (PZ) 100	1000 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67751
MSP430F67761PEU	Active	Production	LQFP (PEU) 128	72 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67761
MSP430F67761PEU.Z	Active	Production	LQFP (PEU) 128	72 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67761
MSP430F67761IPZ	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67761
MSP430F67761IPZ.Z	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67761
MSP430F67771PEU	Active	Production	LQFP (PEU) 128	72 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67771
MSP430F67771PEU.Z	Active	Production	LQFP (PEU) 128	72 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67771
MSP430F67771PEUR	Active	Production	LQFP (PEU) 128	750 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67771
MSP430F67771PEUR.Z	Active	Production	LQFP (PEU) 128	750 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67771
MSP430F67771IPZ	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67771
MSP430F67771IPZ.Z	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67771
MSP430F67781PEU	Active	Production	LQFP (PEU) 128	72 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67781
MSP430F67781IPZ	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67781
MSP430F67781IPZ.Z	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67781
MSP430F67791PEU	Active	Production	LQFP (PEU) 128	72 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67791
MSP430F67791PEU.Z	Active	Production	LQFP (PEU) 128	72 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67791
MSP430F67791PEUR	Active	Production	LQFP (PEU) 128	750 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67791
MSP430F67791PEUR.Z	Active	Production	LQFP (PEU) 128	750 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67791
MSP430F67791IPZ	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67791

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MSP430F67791IPZ.Z	Active	Production	LQFP (PZ) 100	90 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67791
MSP430F67791IPZR	Active	Production	LQFP (PZ) 100	1000 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67791
MSP430F67791IPZR.Z	Active	Production	LQFP (PZ) 100	1000 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	F67791

(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.

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