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)
MSP430FR69271IPM	Active	Production	LQFP (PM) | 64	160 | JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR69271
MSP430FR69271IPMR	Active	Production	LQFP (PM) | 64	1000 | LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR69271
MSP430FR69271IRGCR	Active	Production	VQFN (RGC) | 64	2000 | LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR69271
MSP430FR69271IRGCT	Active	Production	VQFN (RGC) | 64	250 | SMALL T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR69271
MSP430FR6927IPM	Active	Production	LQFP (PM) | 64	160 | JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR6927
MSP430FR6927IPMR	Active	Production	LQFP (PM) | 64	1000 | LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR6927
MSP430FR6927IRGCR	Active	Production	VQFN (RGC) | 64	2000 | LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR6927
MSP430FR6927IRGCT	Active	Production	VQFN (RGC) | 64	250 | SMALL T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR6927
MSP430FR6928IPM	Active	Production	LQFP (PM) | 64	160 | JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR6928
MSP430FR6928IPMR	Active	Production	LQFP (PM) | 64	1000 | LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR6928
MSP430FR6977IPN	Active	Production	LQFP (PN) | 80	119 | JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR6977
MSP430FR6977IPZ	Active	Production	LQFP (PZ) | 100	90 | JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR6977
MSP430FR69791IPN	Active	Production	LQFP (PN) | 80	119 | JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR69791
MSP430FR69791IPNR	Active	Production	LQFP (PN) | 80	1000 | LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR69791
MSP430FR69791IPZ	Active	Production	LQFP (PZ) | 100	90 | JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR69791
MSP430FR69791IPZR	Active	Production	LQFP (PZ) | 100	1000 | LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR69791
MSP430FR6979IPN	Active	Production	LQFP (PN) | 80	119 | JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR6979
MSP430FR6979IPNR	Active	Production	LQFP (PN) | 80	1000 | LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR6979
MSP430FR6979IPZ	Active	Production	LQFP (PZ) | 100	90 | JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR6979
MSP430FR6979IPZR	Active	Production	LQFP (PZ) | 100	1000 | LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR6979

(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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