

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)
MSP430FR4131IG48	Active	Production	TSSOP (DGG) 48	40 TUBE	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR4131
MSP430FR4131IG48R	Active	Production	TSSOP (DGG) 48	2000 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR4131
MSP430FR4131IG56	Active	Production	TSSOP (DGG) 56	35 TUBE	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR4131
MSP430FR4131IG56R	Active	Production	TSSOP (DGG) 56	2000 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR4131
MSP430FR4131IPMR	Active	Production	LQFP (PM) 64	1000 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR4131
MSP430FR4132IG48	Active	Production	TSSOP (DGG) 48	40 TUBE	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR4132
MSP430FR4132IG48R	Active	Production	TSSOP (DGG) 48	2000 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR4132
MSP430FR4132IG56	Active	Production	TSSOP (DGG) 56	35 TUBE	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR4132
MSP430FR4132IG56R	Active	Production	TSSOP (DGG) 56	2000 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR4132
MSP430FR4132IPMR	Active	Production	LQFP (PM) 64	1000 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR4132
MSP430FR4133IG48	Active	Production	TSSOP (DGG) 48	40 TUBE	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR4133
MSP430FR4133IG48R	Active	Production	TSSOP (DGG) 48	2000 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR4133
MSP430FR4133IG56	Active	Production	TSSOP (DGG) 56	35 TUBE	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR4133
MSP430FR4133IG56R	Active	Production	TSSOP (DGG) 56	2000 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR4133
MSP430FR4133IPM	Active	Production	LQFP (PM) 64	160 JEDEC TRAY (10+1)	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR4133
MSP430FR4133IPMR	Active	Production	LQFP (PM) 64	1000 LARGE T&R	Yes	NIPDAU	Level-3-260C-168 HR	-40 to 85	FR4133

(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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