

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)
MSP4301103IPWR	Active	Production	TSSOP (PW) 24	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE253
MSP430AFE221IPW	Active	Production	TSSOP (PW) 24	60 TUBE	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE221
MSP430AFE221IPW.B	Active	Production	TSSOP (PW) 24	60 TUBE	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE221
MSP430AFE221IPWR	Active	Production	TSSOP (PW) 24	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE221
MSP430AFE221IPWR.B	Active	Production	TSSOP (PW) 24	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE221
MSP430AFE222IPW	Active	Production	TSSOP (PW) 24	60 TUBE	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE222
MSP430AFE222IPW.B	Active	Production	TSSOP (PW) 24	60 TUBE	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE222
MSP430AFE222IPWR	Active	Production	TSSOP (PW) 24	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE222
MSP430AFE222IPWR.B	Active	Production	TSSOP (PW) 24	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE222
MSP430AFE223IPW	Active	Production	TSSOP (PW) 24	60 TUBE	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE223
MSP430AFE223IPW.B	Active	Production	TSSOP (PW) 24	60 TUBE	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE223
MSP430AFE223IPWR	Active	Production	TSSOP (PW) 24	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE223
MSP430AFE223IPWR.B	Active	Production	TSSOP (PW) 24	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE223
MSP430AFE231IPW	Active	Production	TSSOP (PW) 24	60 TUBE	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE231
MSP430AFE231IPW.B	Active	Production	TSSOP (PW) 24	60 TUBE	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE231
MSP430AFE231IPWR	Active	Production	TSSOP (PW) 24	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE231
MSP430AFE231IPWR.B	Active	Production	TSSOP (PW) 24	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE231
MSP430AFE232IPW	Active	Production	TSSOP (PW) 24	60 TUBE	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE232
MSP430AFE232IPW.B	Active	Production	TSSOP (PW) 24	60 TUBE	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE232
MSP430AFE232IPWR	Active	Production	TSSOP (PW) 24	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE232
MSP430AFE232IPWR.B	Active	Production	TSSOP (PW) 24	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE232
MSP430AFE233IPW	Active	Production	TSSOP (PW) 24	60 TUBE	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE233
MSP430AFE233IPW.B	Active	Production	TSSOP (PW) 24	60 TUBE	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE233
MSP430AFE233IPWR	Active	Production	TSSOP (PW) 24	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE233
MSP430AFE233IPWR.B	Active	Production	TSSOP (PW) 24	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE233
MSP430AFE251IPW	Active	Production	TSSOP (PW) 24	60 TUBE	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE251
MSP430AFE251IPW.B	Active	Production	TSSOP (PW) 24	60 TUBE	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE251
MSP430AFE251IPWR	Active	Production	TSSOP (PW) 24	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE251
MSP430AFE251IPWR.B	Active	Production	TSSOP (PW) 24	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE251

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)
MSP430AFE252IPW	Active	Production	TSSOP (PW) 24	60 TUBE	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE252
MSP430AFE252IPW.B	Active	Production	TSSOP (PW) 24	60 TUBE	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE252
MSP430AFE252IPWR	Active	Production	TSSOP (PW) 24	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE252
MSP430AFE252IPWR.B	Active	Production	TSSOP (PW) 24	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE252
MSP430AFE253IPW	Active	Production	TSSOP (PW) 24	60 TUBE	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE253
MSP430AFE253IPW.B	Active	Production	TSSOP (PW) 24	60 TUBE	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE253
MSP430AFE253IPWR	Active	Production	TSSOP (PW) 24	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE253
MSP430AFE253IPWR.B	Active	Production	TSSOP (PW) 24	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE253
MSP430AFE253IPWRG4	Active	Production	TSSOP (PW) 24	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE253
MSP430AFE253IPWRG4.B	Active	Production	TSSOP (PW) 24	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	430AFE253

⁽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.

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.