

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)
REF7012QDGKR	Active	Production	VSSOP (DGK) 8	3000 LARGE T&R	Yes	NIPDAU	Level-2-260C-1 YEAR	-40 to 125	2L1S
REF7012QDGKR.A	Active	Production	VSSOP (DGK) 8	3000 LARGE T&R	Yes	NIPDAU	Level-2-260C-1 YEAR	-40 to 125	2L1S
REF7012QFKHT	Active	Production	LCCC (FKH) 8	250 SMALL T&R	ROHS Exempt	Call TI	N/A for Pkg Type	-40 to 125	REF12FKH
REF7012QFKHT.A	Active	Production	LCCC (FKH) 8	250 SMALL T&R	ROHS Exempt	Call TI	N/A for Pkg Type	-40 to 125	REF12FKH
REF7025QDGKR	Active	Production	VSSOP (DGK) 8	3000 LARGE T&R	Yes	NIPDAU	Level-2-260C-1 YEAR	-40 to 125	2TAS
REF7025QDGKR.A	Active	Production	VSSOP (DGK) 8	3000 LARGE T&R	Yes	NIPDAU	Level-2-260C-1 YEAR	-40 to 125	2TAS
REF7025QFKHT	Active	Production	LCCC (FKH) 8	250 SMALL T&R	ROHS Exempt	Call TI	N/A for Pkg Type	-40 to 125	REF25FKH
REF7025QFKHT.A	Active	Production	LCCC (FKH) 8	250 SMALL T&R	ROHS Exempt	Call TI	N/A for Pkg Type	-40 to 125	REF25FKH
REF7030QFKHT	Active	Production	LCCC (FKH) 8	250 SMALL T&R	ROHS Exempt	Call TI	N/A for Pkg Type	-40 to 125	REF30FKH
REF7030QFKHT.A	Active	Production	LCCC (FKH) 8	250 SMALL T&R	ROHS Exempt	Call TI	N/A for Pkg Type	-40 to 125	REF30FKH
REF7033QFKHT	Active	Production	LCCC (FKH) 8	250 SMALL T&R	ROHS Exempt	Call TI	N/A for Pkg Type	-40 to 125	REF33FKH
REF7033QFKHT.A	Active	Production	LCCC (FKH) 8	250 SMALL T&R	ROHS Exempt	Call TI	N/A for Pkg Type	-40 to 125	REF33FKH
REF7040QDGKR	Active	Production	VSSOP (DGK) 8	3000 LARGE T&R	Yes	NIPDAU	Level-2-260C-1 YEAR	-40 to 125	2TDS
REF7040QDGKR.A	Active	Production	VSSOP (DGK) 8	3000 LARGE T&R	Yes	NIPDAU	Level-2-260C-1 YEAR	-40 to 125	2TDS
REF7040QFKHT	Active	Production	LCCC (FKH) 8	250 SMALL T&R	ROHS Exempt	Call TI	N/A for Pkg Type	-40 to 125	REF40FKH
REF7040QFKHT.A	Active	Production	LCCC (FKH) 8	250 SMALL T&R	ROHS Exempt	Call TI	N/A for Pkg Type	-40 to 125	REF40FKH
REF7050QDGKR	Active	Production	VSSOP (DGK) 8	3000 LARGE T&R	Yes	NIPDAU	Level-2-260C-1 YEAR	-40 to 125	2TES
REF7050QDGKR.A	Active	Production	VSSOP (DGK) 8	3000 LARGE T&R	Yes	NIPDAU	Level-2-260C-1 YEAR	-40 to 125	2TES
REF7050QFKHT	Active	Production	LCCC (FKH) 8	250 SMALL T&R	ROHS Exempt	Call TI	N/A for Pkg Type	-40 to 125	REF50FKH
REF7050QFKHT.A	Active	Production	LCCC (FKH) 8	250 SMALL T&R	ROHS Exempt	Call TI	N/A for Pkg Type	-40 to 125	REF50FKH

(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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