

# DFN2020MD-6

Leadless package with side-wettable flanks

Nexperia's unique offering of automotive grade MOSFETs, both qualified to 175 °C and incorporating side-wettable flanks. Offering design engineers increased efficiency, where space saving is paramount. Ideal for the demands of under-the-hood applications.

# Comparison between SOT223 and DFN2020



6.5 x 3.5 mm footprint area

2 x 2 mm footprint area

- > Ultra-compact footprint 4 mm²
- > Ultra-low height < 0.65 mm
- > 90 % smaller than SOT223

## Side wettable flanks



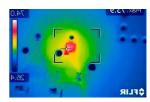
- > High board level reliability
- **>** Easy optical inspection
- > Robust solder joints

## Ultra low on-resistance



- >  $R_{DS(on)}$  down to 16 m $\Omega$  (@4.5 V) for 20 V N-Ch
- >  $R_{DS(on)}$  down to 38 m $\Omega$  (@4.5 V) for -20 V

# High thermal capabilities



- > Low R.
- Extended temperature range Tj = 175 °C
- > Exposed drain pad for excellent thermal conduction



# **DFN2020MD-6** 175°C automotive portfolio (AEC-Q101 qualified)

Package								DFN2020MD-6 (SOT1220)
Size (mm)								2.0 x 2.0 x 0.65
Pol.	V <sub>DS</sub>				$V_{GSth}$		x] @ V <sub>GS</sub> =	Type Number
						10 V (mΩ)	4.5 V (mΩ)	Type Number
Ν	20	12	26	0.6	1.3		16	BUK4D16-20
	30	12	8.3	0.6	1.25		60	BUK4D60-30
			3.8	0.75	1.25		72	BUK4D72-30
		20	23	1	2.5	16	24	BUK6D16-30E
			22	1	2.5	22	30	BUK6D22-30E
			17	1	2.5	38	54	BUK6D38-30E
			11	1	2.5	72	100	BUK6D72-30E
	40	15	19	1.4	2.1	23	30	BUK9D23-40E
		20	19	1.3	2.7	23	30	BUK6D23-40E
			18	1	2.5	30	40	BUK6D30-40E
			5.7	1	2.5	120	160	BUK6D120-40E
			19	2.4	4	25		BUK7D25-40E
	60	20	13	1.3	2.7	43	53	BUK6D43-60E
			11	1.3	2.7	56	69	BUK6D56-60E
			10.6	1.3	2.7	77	98	BUK6D77-60E
			7.4	1.3	2.7	125	146	BUK6D125-60E
			5.7	1.3	2.7	210	262	BUK6D210-60E
			14	2.4	4	36		BUK7D36-60E
	80	20	9.8	1.3	2.7	81	97	BUK6D81-80E
			5.1	1.3	2.7	230	275	BUK6D230-80E
	100	20	3.7	1.3	2.7	385	432	BUK6D385-100E
Р	-20	8	-3.2	-0.75	-1.25		122	BUK4D122-20P
		12	-18	-0.6	-1.3		38	BUK4D38-20P
			-6.7	-0.6	-1.3		110	BUK4D110-20P
	-40	20	-14	-1.4	-2.7	43	70	BUK6D43-40P
	-60	20	-8	-1.9	-3.2	120		BUK6D120-60P



For more information on DFN2020MD-6 MOSFETs, including datasheets, application notes, videos, blogs, news and more. Visit <u>nexperia.com/DFN2020MD-6</u>

### © 2023 Nexperia B.V.

All rights reserved. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice. No liability will be accepted by the publisher for any consequence of its use. Publication thereof does not convey nor imply any license under patent- or other industrial or intellectual property rights.

### Date of release:

July 2023

