

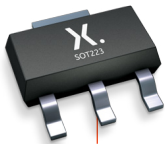


› DFN2020MD-6

Leadless package with side-wettable flanks

The DFN2020MD-6 enlarges Nexperia's 175°C, AEC-Q101 qualified, automotive MOSFET portfolio towards 2.0 x 2.0 mm footprint

Comparison between SOT223 and DFN2020



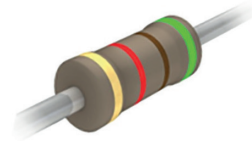
6.5 x 3.5 mm
footprint area



2 x 2 mm
footprint area

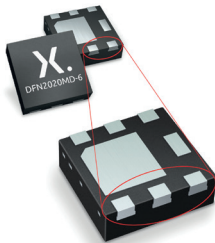
- › Ultra-compact footprint - 4 mm²
- › Ultra-low height < 0.65 mm
- › 90 % smaller than SOT223

Ultra low on-resistance

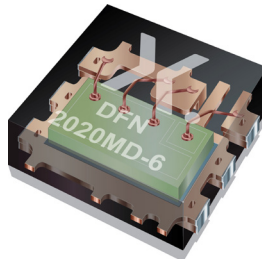


- › $R_{DS(on)}$ down to 30 m Ω
(@ 4.5 V) for 40 V N-Ch
- › $R_{DS(on)}$ down to 40 m Ω
(@ 10 V) for -40 V P-ch

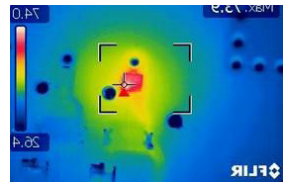
Side wettable flanks



- › High board level reliability
- › Easy optical inspection
- › Robust solder joints



High thermal capabilities



- › Low R_{th}
- › Extended temperature range
 $T_j = 175^\circ\text{C}$
- › 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 _{DS}	V _{GS}	I _D [max]	V _{GSth}	V _{GSth}	R _{DS(on)} [max] @ V _{GS} =		Type Number
	[max] (V)		(A)	min (V)	max (V)	10 V (mΩ)	4.5 V (mΩ)	
N	30	20	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
			19	1.3	2.7	23	30	BUK6D23-40E
		20		2.3	4	25		
			5.7	1	2.5	120	160	BUK6D120-40E
			60	20	11	1.3	2.7	56
	13	1.3			2.7	43	53	BUK6D43-60E
	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
	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
P	-40	20	-14	-1.4	-2.7	43	70	BUK6D43-40P
	-60	20	-8	-1.9	-3.2	120		BUK6D120-60P

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