
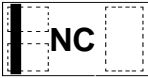
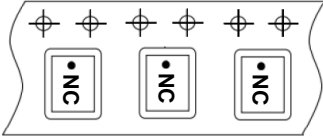
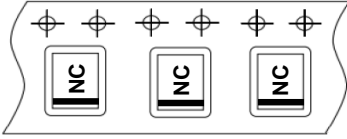

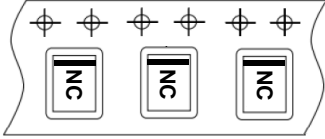
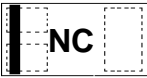
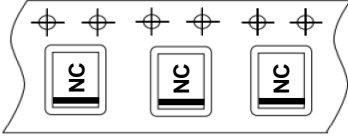


Marking Information

DMN2400UFB4-7	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Top View Dot Denotes Drain Side</p> </div> <div style="text-align: center;"> <p>From date code 1527 (YYWW), this changes to:</p>  <p>Top View Bar Denotes Gate and Source Side</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;">   </div>
DMN2400UFB4-7R	<div style="text-align: center; margin-bottom: 10px;">  <p>Top View Bar Denotes Gate and Source Side</p> </div> <div style="display: flex; justify-content: space-between; align-items: center;">  <p>NC = Part Marking Code</p> </div>
DMN2400UFB4-7B	<div style="text-align: center; margin-bottom: 10px;">  <p>Top View Bar Denotes Gate and Source Side</p> </div> <div style="display: flex; justify-content: space-between; align-items: center;">  <p>NC = Part Marking Code</p> </div>

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic			Symbol	Value	Unit
Drain-Source Voltage			V _{DSS}	20	V
Gate-Source Voltage			V _{GSS}	±12	V
Continuous Drain Current (Note 5) V _{GS} = 4.5V	Steady State	T _A = +25°C	I _D	0.75	A
		T _A = +85°C		0.55	
Pulsed Drain Current (Notes 5 & 6)			I _{DM}	3	A

Thermal Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Total Power Dissipation (Note 5)	P _D	0.47	mW
Thermal Resistance, Junction to Ambient	R _{θJA}	258	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

Notes: 5. Device mounted on FR-4 PCB, with minimum recommended pad layout, single sided.
6. Device mounted on minimum recommended pad layout test board, 10μs pulse duty cycle = 1%.

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 7)						
Drain-Source Breakdown Voltage	BV _{DSS}	20	—	—	V	V _{GS} = 0V, I _D = 250μA
Zero Gate Voltage Drain Current T _J = +25°C	I _{DSS}	—	—	100 50	nA	V _{DS} = 20V, V _{GS} = 0V V _{DS} = 5V, V _{GS} = 0V
Gate-Source Leakage	I _{GSS}	—	—	±100	nA	V _{GS} = ±3V, V _{DS} = 0V
Gate-Source Leakage	I _{GSS}	—	—	±1.0	μA	V _{GS} = ±4.5V, V _{DS} = 0V
Gate-Source Leakage	I _{GSS}	—	—	±50	μA	V _{GS} = ±10V, V _{DS} = 0V
ON CHARACTERISTICS (Note 7)						
Gate Threshold Voltage	V _{GS(TH)}	0.5	—	0.9	V	V _{DS} = V _{GS} , I _D = 250μA
Static Drain-Source On-Resistance	R _{DS(ON)}	—	—	0.55	Ω	V _{GS} = 4.5V, I _D = 600mA
		—	—	0.75		V _{GS} = 2.5V, I _D = 500mA
		—	—	0.9		V _{GS} = 1.8V, I _D = 350mA
Forward Transfer Admittance	Y _{fs}	—	1.0	—	S	V _{DS} = 10V, I _D = 400mA
Diode Forward Voltage	V _{SD}	—	0.7	1.2	V	V _{GS} = 0V, I _S = 150mA
DYNAMIC CHARACTERISTICS (Note 8)						
Input Capacitance	C _{iSS}	—	36.0	—	pF	V _{DS} = 16V, V _{GS} = 0V, f = 1.0MHz
Output Capacitance	C _{oss}	—	5.7	—	pF	
Reverse Transfer Capacitance	C _{rss}	—	4.2	—	pF	
Total Gate Charge	Q _g	—	0.5	—	nC	V _{GS} = 4.5V, V _{DS} = 10V, I _D = 250mA
Gate-Source Charge	Q _{gs}	—	0.07	—	nC	
Gate-Drain Charge	Q _{gd}	—	0.1	—	nC	
Turn-On Delay Time	t _{D(ON)}	—	4.11	—	ns	V _{DD} = 10V, V _{GS} = 4.5V, R _L = 47Ω, R _g = 10Ω, I _D = 200mA
Turn-On Rise Time	t _R	—	3.82	—	ns	
Turn-Off Delay Time	t _{D(OFF)}	—	14.8	—	ns	
Turn-Off Fall Time	t _F	—	9.6	—	ns	

Notes: 7. Short duration pulse test used to minimize self-heating effect.
8. Guaranteed by design. Not subject to product testing.

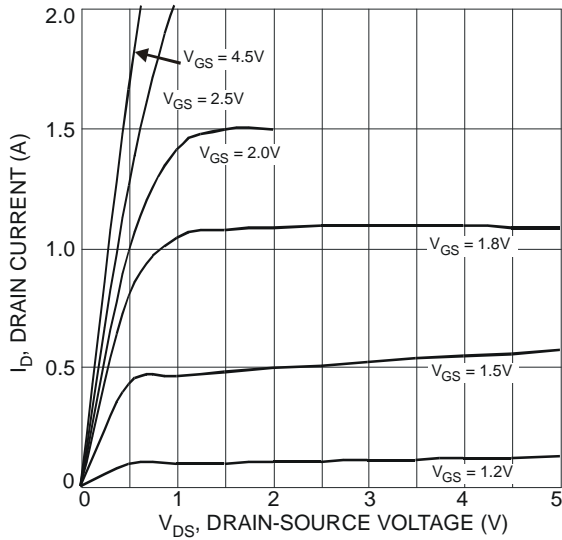


Fig. 1 Typical Output Characteristics

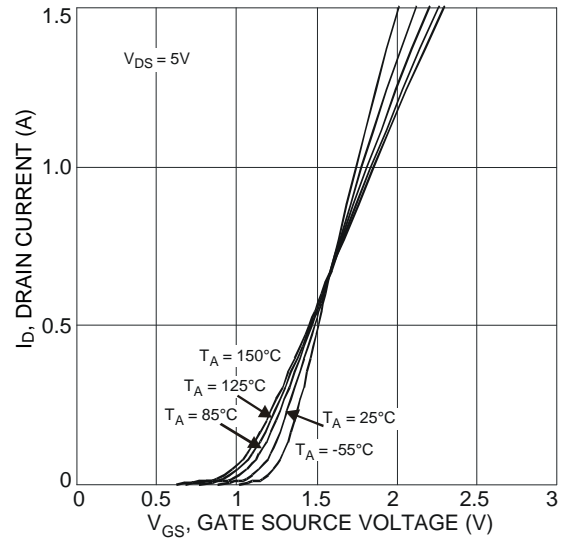


Fig. 2 Typical Transfer Characteristics

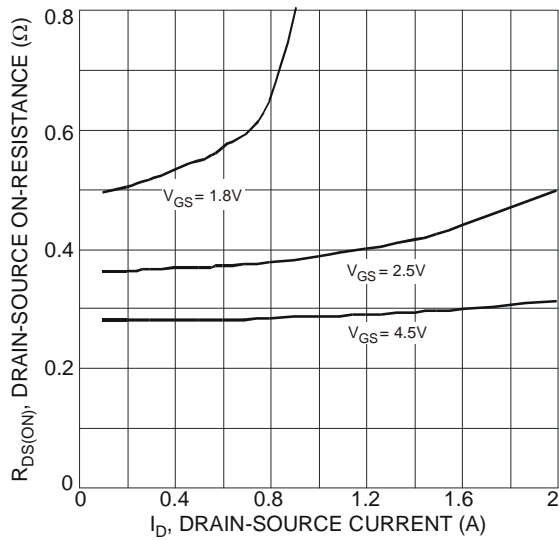


Fig. 3 Typical On-Resistance vs. Drain Current and Gate Voltage

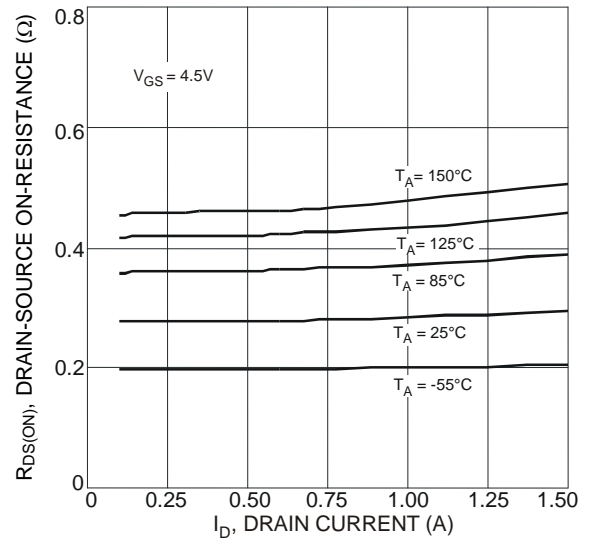


Fig. 4 Typical Drain-Source On-Resistance vs. Drain Current and Temperature

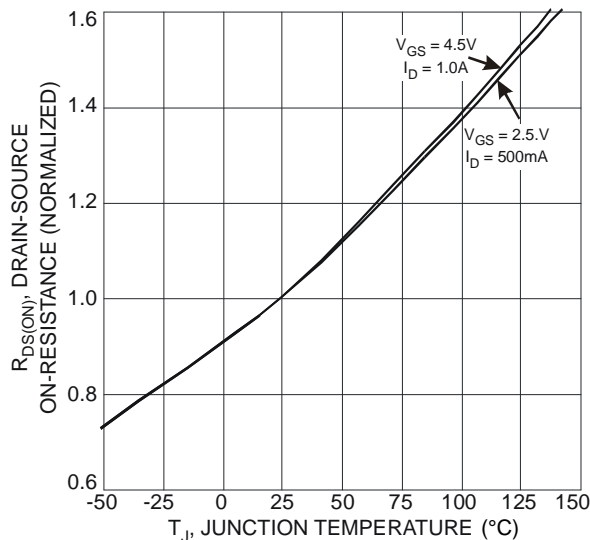


Fig. 5 On-Resistance Variation with Temperature

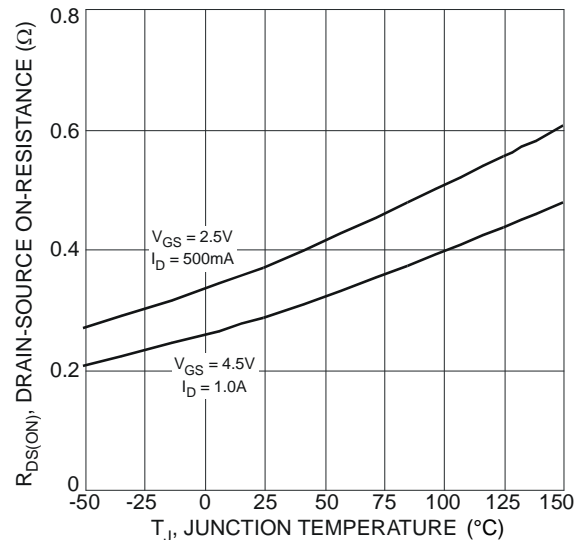


Fig. 6 On-Resistance Variation with Temperature

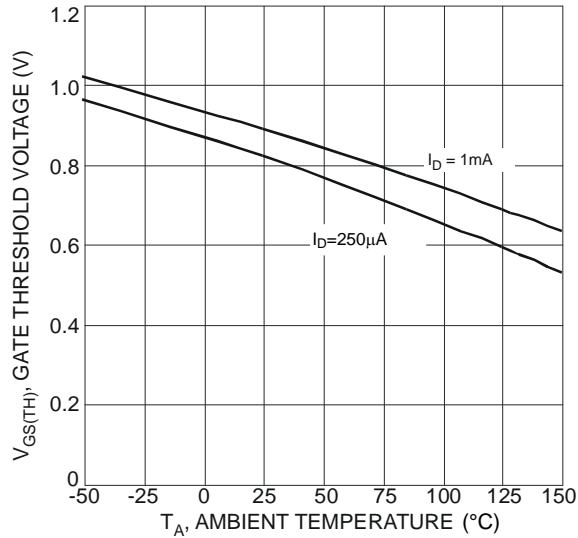


Fig. 7 Gate Threshold Variation vs. Ambient Temperature

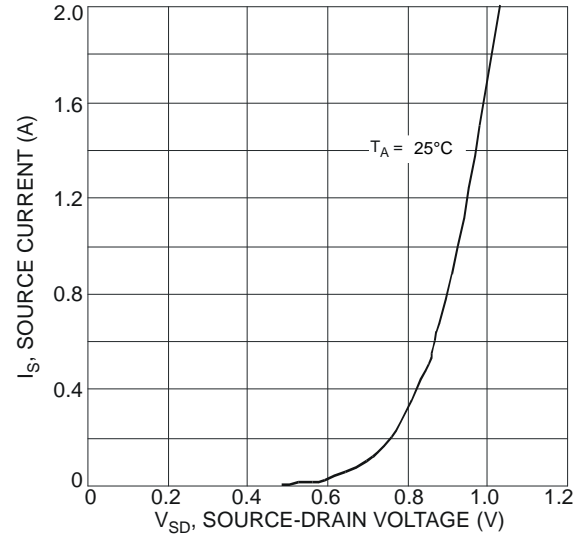


Fig. 8 Diode Forward Voltage vs. Current

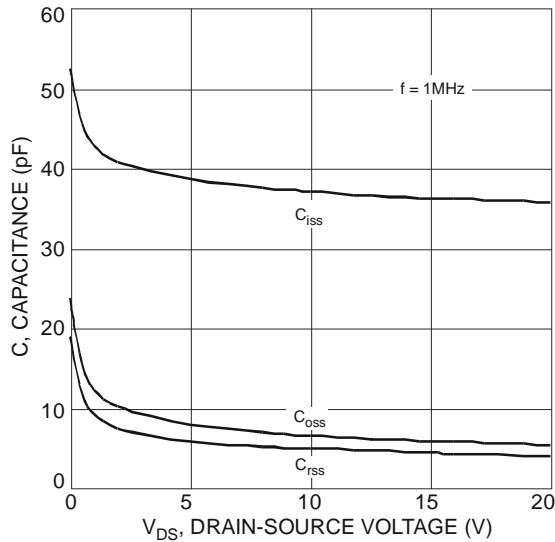


Fig. 9 Typical Capacitance

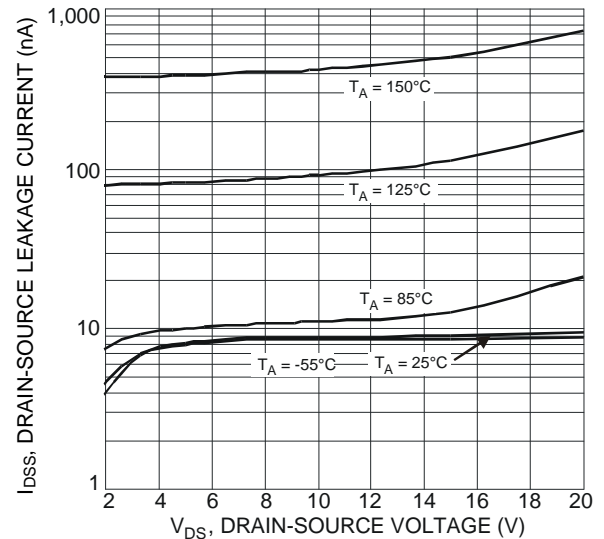


Fig. 10 Typical Drain-Source Leakage Current vs. Drain-Source Voltage

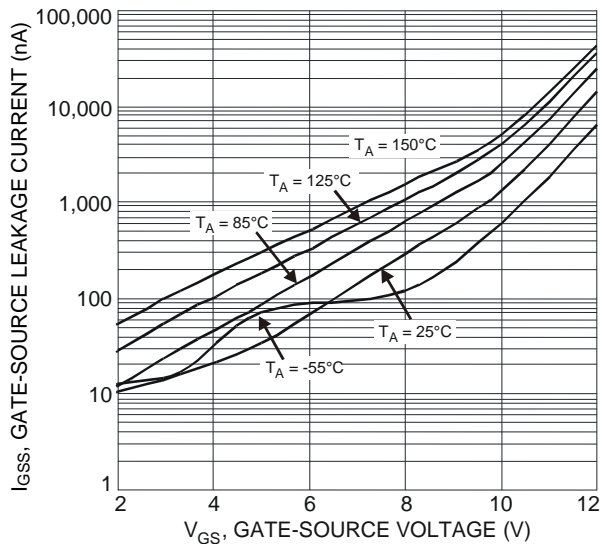


Fig. 11 Typical Gate-Source Leakage Current vs. Gate-Source Voltage

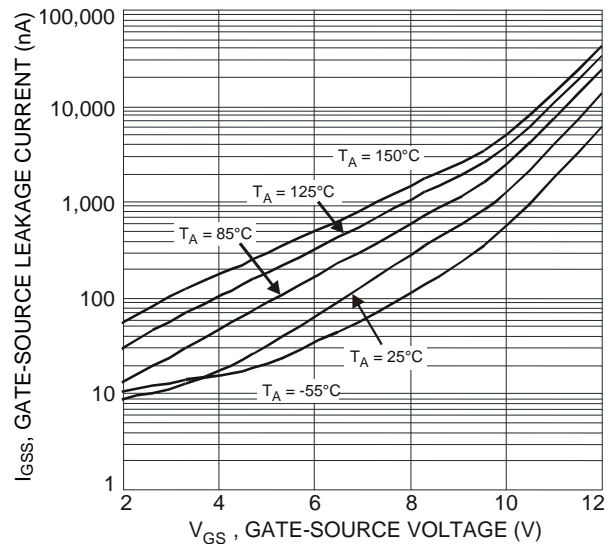


Fig. 12 Typical Gate-Source Leakage Current vs. Gate-Source Voltage

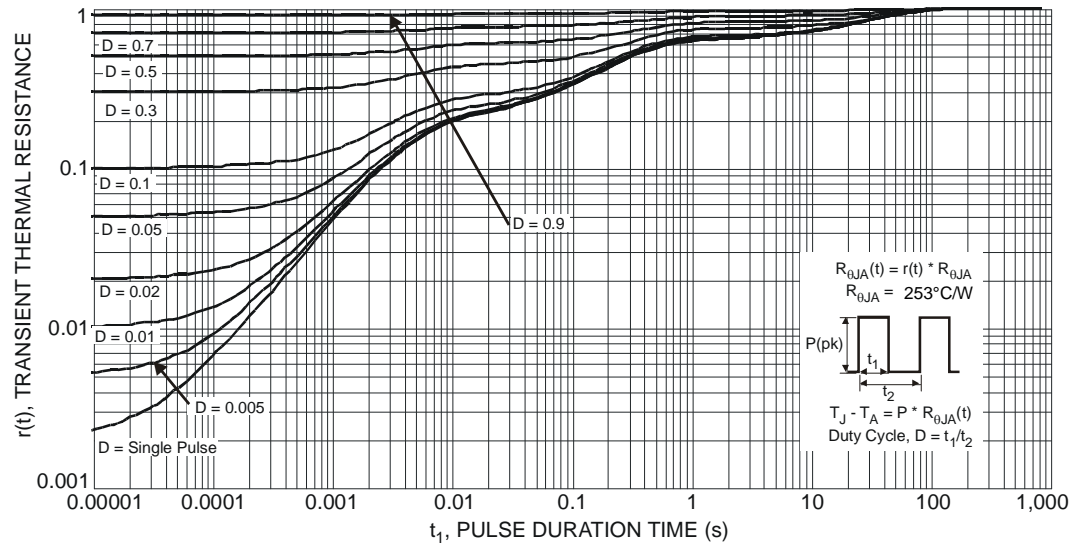
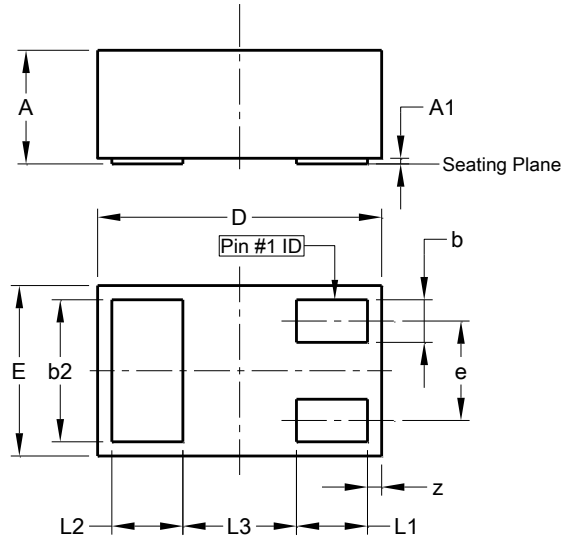


Fig. 13 Transient Thermal Response

Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

X2-DFN1006-3

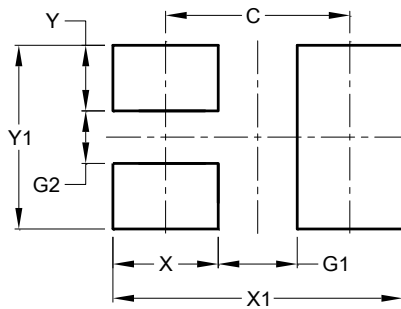


X2-DFN1006-3			
Dim	Min	Max	Typ
A	—	0.40	—
A1	0.00	0.05	0.03
b	0.10	0.20	0.15
b2	0.45	0.55	0.50
D	0.95	1.05	1.00
E	0.55	0.65	0.60
e	-	-	0.35
L1	0.20	0.30	0.25
L2	0.20	0.30	0.25
L3	-	-	0.40
z	0.02	0.08	0.05
All Dimensions in mm			

Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

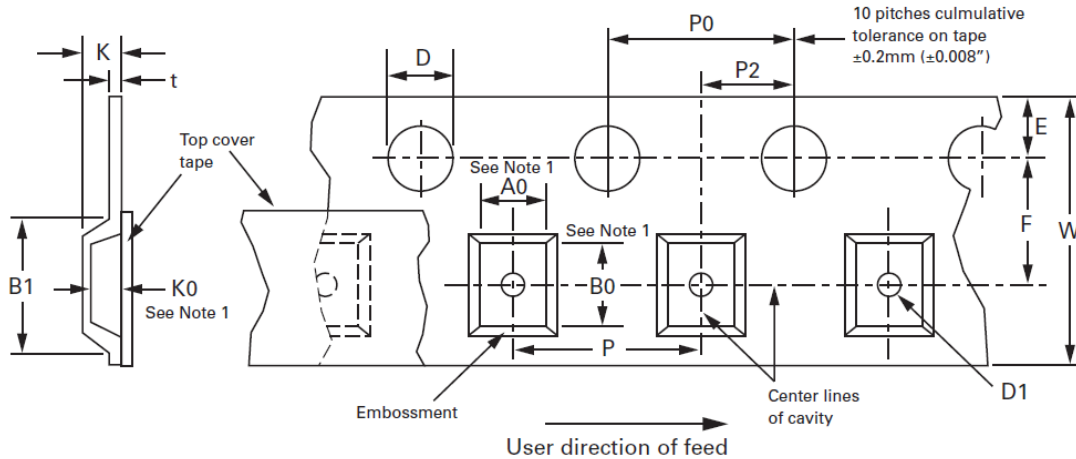
X2-DFN1006-3



Dimensions	Value (in mm)
C	0.70
G1	0.30
G2	0.20
X	0.40
X1	1.10
Y	0.25
Y1	0.70

Tape Information

EMBOSSED CARRIER TAPE SPECIFICATIONS



8, 12, 16, 24mm EMBOSSED TAPE DIMENSIONS IN mm						
Tape Size	D	E	P ₀	t _{max}	A ₀ B ₀ K ₀	
8mm	1.50 +0.10 -0.0	1.75 ± 0.10	4.0 ± 0.10	0.400	See Note 9	Constant Dimensions

Tape Size	B1 max	D1 min	F	K max	P2	R min	W	Package Type
8mm	4.5	0.35	3.5 ± 0.05	2.4	2.0 ± 0.05	25	8.0 ± 0.30	Refer to 8mm Device Tape Orientation Table

P					
Tape Size	2.0 ± 0.05	4.0 ± 0.10	8.0 ± 0.10	12.0 ± 0.10	16.0 ± 0.10
8mm	DFN1006 (-7B)	DFN1006 (-7) DFN1006 (-7R)	—	—	—

Note: 9. A₀ B₀ K₀ are determined by component size.

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