

## Important notice

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On 7 February 2017 the former NXP Standard Product business became a new company with the tradename **Nexperia**. Nexperia is an industry leading supplier of Discrete, Logic and PowerMOS semiconductors with its focus on the automotive, industrial, computing, consumer and wearable application markets

In data sheets and application notes which still contain NXP or Philips Semiconductors references, use the references to Nexperia, as shown below.

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Instead of sales.addresses@www.nxp.com or sales.addresses@www.semiconductors.philips.com, use salesaddresses@nexperia.com (email)

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If you have any questions related to the data sheet, please contact our nearest sales office via e-mail or telephone (details via **salesaddresses@nexperia.com**). Thank you for your cooperation and understanding,

Kind regards,

Team Nexperia



## Thermal RC network (Foster)

## **SPICE thermal model**

PSMN1R5-30YL

thermal resistance from junction to mounting base		-	Typ -	1.10	K/W
Cth <sub>1</sub>	7.292E-05 F		Δ		
Cth <sub>2</sub>	2.117E-04 F			<u>tj</u>	
Cth <sub>3</sub>	9.369E-04 F				
Cth <sub>4</sub>	2.126E-03 F				
Cth <sub>5</sub>	7.860E-03 F				
Cth <sub>6</sub>	3.347E-02 F				
Cth <sub>7</sub>	1.467E-01 F		,		
Cth <sub>8</sub>	2.232E+00 F			Rth2 + Cth2	
Rth₄	1 430F-03 O				
			r	5	
				Rth3 = Cth3	
			'		
				$\bigcap_{Dth_{A}} \bot_{Cth_{A}}$	
			(P)	<u> </u>	
			,	<b>←</b>	
				Rth5 + Cth5	
			۱ ۱		
				<b>←</b>	
				Rth7 + Cth7	
			'	₹	
PSMN1R5-30YL					
24/6/2045					
				<b>—</b>	
1.10 K/W				tomb	
			$\Diamond$		
				oo raari oo	
	Cth <sub>2</sub> Cth <sub>3</sub> Cth <sub>4</sub> Cth <sub>5</sub> Cth <sub>6</sub> Cth <sub>7</sub> Cth <sub>8</sub> Rth <sub>1</sub> Rth <sub>2</sub> Rth <sub>3</sub> Rth <sub>4</sub> Rth <sub>5</sub> Rth <sub>6</sub> Rth <sub>7</sub> Rth <sub>8</sub>	$ \begin{array}{c} Cth_2 & 2.117E-04 \ F \\ Cth_3 & 9.369E-04 \ F \\ Cth_4 & 2.126E-03 \ F \\ Cth_5 & 7.860E-03 \ F \\ Cth_6 & 3.347E-02 \ F \\ Cth_7 & 1.467E-01 \ F \\ Cth_8 & 2.232E+00 \ F \\ \end{array} $	$ \begin{array}{c} Cth_2 & 2.117E-04 \ F \\ Cth_3 & 9.369E-04 \ F \\ Cth_4 & 2.126E-03 \ F \\ Cth_5 & 7.860E-03 \ F \\ Cth_6 & 3.347E-02 \ F \\ Cth_7 & 1.467E-01 \ F \\ Cth_8 & 2.232E+00 \ F \\  \end{array} $ $ \begin{array}{c} Rth_1 & 1.430E-03 \ \Omega \\ Rth_2 & 4.474E-03 \ \Omega \\ Rth_3 & 1.163E-02 \ \Omega \\ Rth_4 & 4.682E-02 \ \Omega \\ Rth_6 & 3.103E-01 \ \Omega \\ Rth_6 & 3.103E-01 \ \Omega \\ Rth_7 & 5.472E-01 \ \Omega \\ Rth_8 & 5.267E-02 \ \Omega \\  \end{array} $ $ \begin{array}{c} PSMN1R5-30YL \\ \hline \end{array} $	Cth <sub>2</sub> 2.117E-04 F Cth <sub>3</sub> 9.369E-04 F Cth <sub>4</sub> 2.126E-03 F Cth <sub>5</sub> 7.860E-03 F Cth <sub>6</sub> 3.347E-02 F Cth <sub>7</sub> 1.467E-01 F Cth <sub>8</sub> 2.232E+00 F  Rth <sub>1</sub> 1.430E-03 Ω Rth <sub>2</sub> 4.474E-03 Ω Rth <sub>3</sub> 1.163E-02 Ω Rth <sub>4</sub> 4.682E-02 Ω Rth <sub>5</sub> 1.255E-01 Ω Rth <sub>6</sub> 3.103E-01 Ω Rth <sub>7</sub> 5.472E-01 Ω Rth <sub>8</sub> 5.267E-02 Ω  P  P  P  P  P  P  P  P  P  P  P  P  P	Cth <sub>2</sub> 2.117E-04 F Cth <sub>3</sub> 9.369E-04 F Cth <sub>4</sub> 2.126E-03 F Cth <sub>5</sub> 7.860E-03 F Cth <sub>6</sub> 3.347E-02 F Cth <sub>7</sub> 1.467E-01 F Cth <sub>8</sub> 2.232E+00 F Rth <sub>1</sub> 1.430E-03 Ω Rth <sub>2</sub> 4.474E-03 Ω Rth <sub>3</sub> 1.163E-02 Ω Rth <sub>4</sub> 4.682E-02 Ω Rth <sub>5</sub> 1.255E-01 Ω Rth <sub>9</sub> 3.103E-01 Ω Rth <sub>9</sub> 5.472E-01 Ω Rth <sub>9</sub> 5.267E-02 Ω Rth <sub>8</sub> 5.267E-02 Ω Rth <sub>9</sub> Cth <sub>9</sub>