

Rev.B May.-2023

器件

PDFN5×6 N
 N-Channel MOSFET in a PDFN5 × 6 Plastic Package.

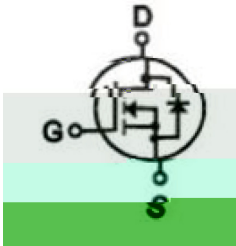
特点

Low $R_{DS(ON)}$ to minimize conductive loss; low Gate Charge for fast switching; Low Thermal resistance;
 HF Product.

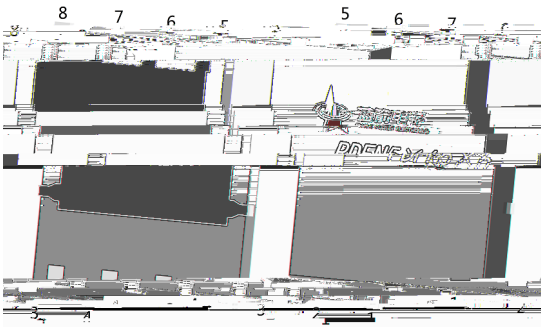
应用

Battery Management.

封装与引脚



封装与引脚



PIN1 2 3 S PIN4 G PIN5 6 7 8 D

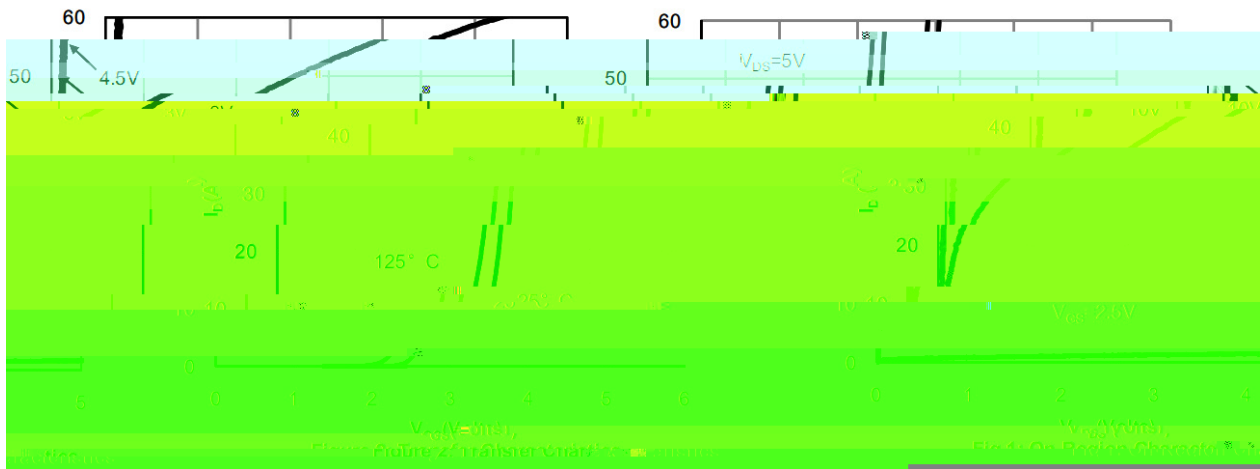
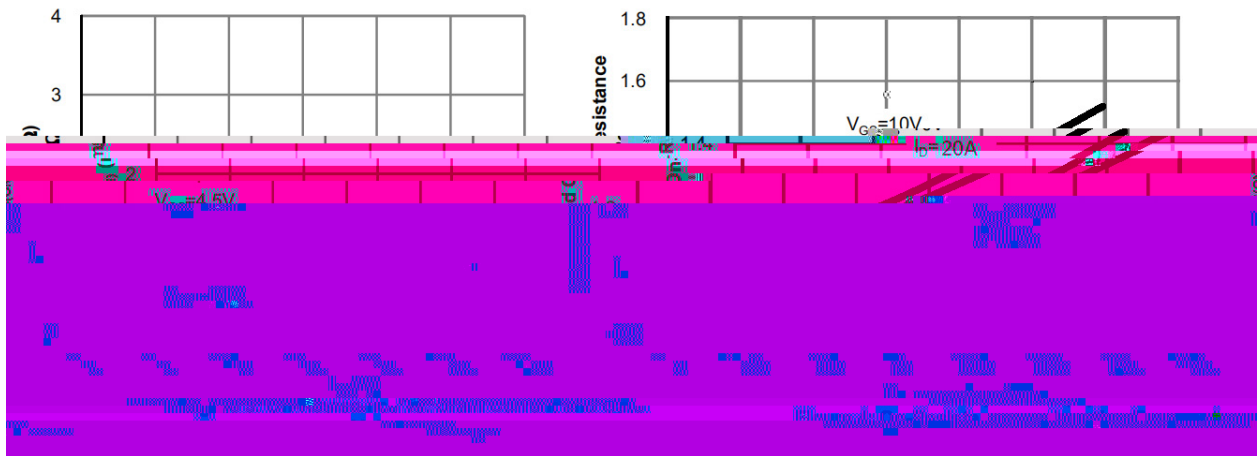
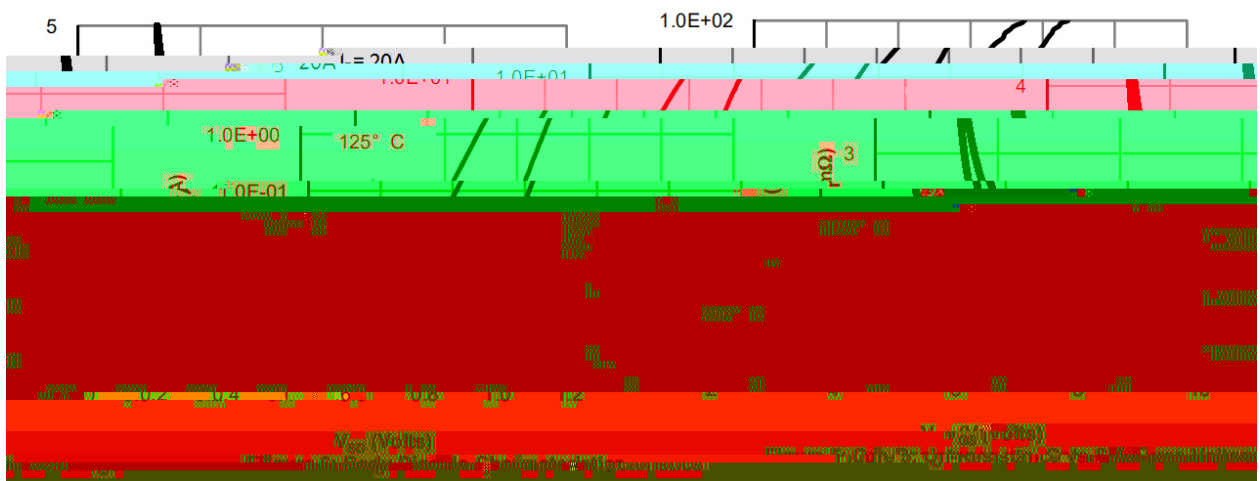
标记

See Marking Instructions.

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	40	V
Drain Current - Continuous	I_D	215	A
Drain Current – Pulsed	I_{DM}	430	A
Gate-Source Voltage	V_{GS}	± 20	V
Power Dissipation	$P_D(T_c=25^\circ\text{C})$	70	W
Single Pulse Avalanche Energy(L=0.5mH)	E_{AS}	542	mJ
Avalanche Current(L=0.5mH)	I_{AS}	44	A
Junction and Storage Temperature Range	T_j, T_{stg}	-55 to 150	
Thermal resistance, junction - case	$R_{\theta JC}$	1.79	/ W
Thermal resistance, junction - ambient	$R_{\theta JA}$	50	/ W

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D=250\mu\text{A}, V_{GS}=0\text{V}$	40	46		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=40\text{V}, V_{GS}=0\text{V}$			1.0	μA
Gate-Body leakage current	I_{GSS}	$V_{DS}=0\text{V}, V_{GS}=\pm 20\text{V}$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	1	1.5	2.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS}=10\text{V}, I_D=20\text{A}$		0.93	1.0	m Ω
		$V_{GS}=4.5\text{V}, I_D=10\text{A}$		1.28	2.0	
Input Capacitance	C_{iss}	$V_{DS}=25\text{V}, V_{GS}=0\text{V}$ $f=1.0\text{MHz}$		5800		pF
Output Capacitance	C_{oss}			1860		
Reverse Transfer Capacitance	C_{rss}			135		
Gate resistance	R_g	$V_{GS}=0\text{V}, V_{DS}=0\text{V}$ $f=1\text{MHz}$		1.0		Ω_{oss}

3A'EV f



3A'EV f

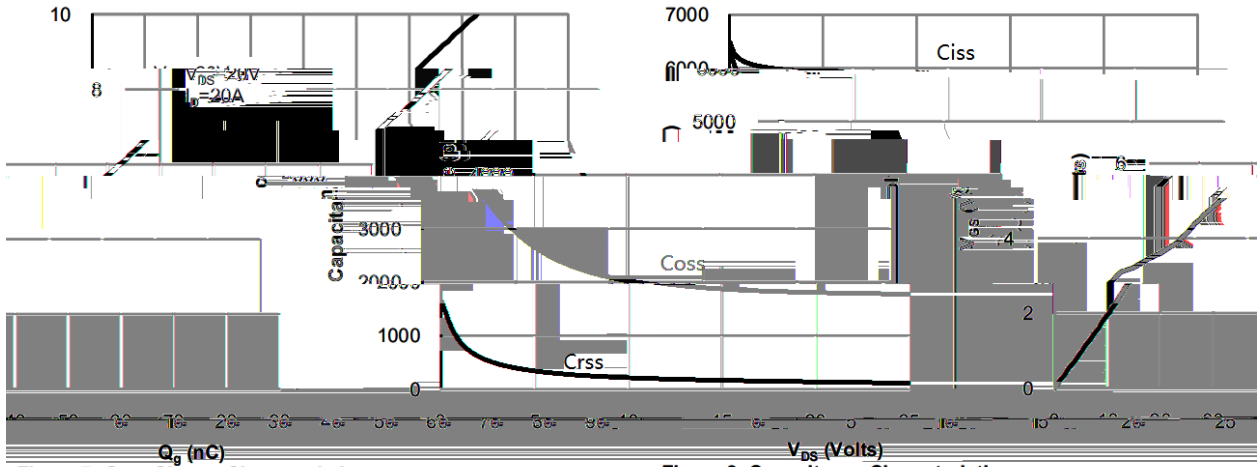


Figure 7: Gate-Charge Characteristics

Figure 8: Capacitance Characteristics

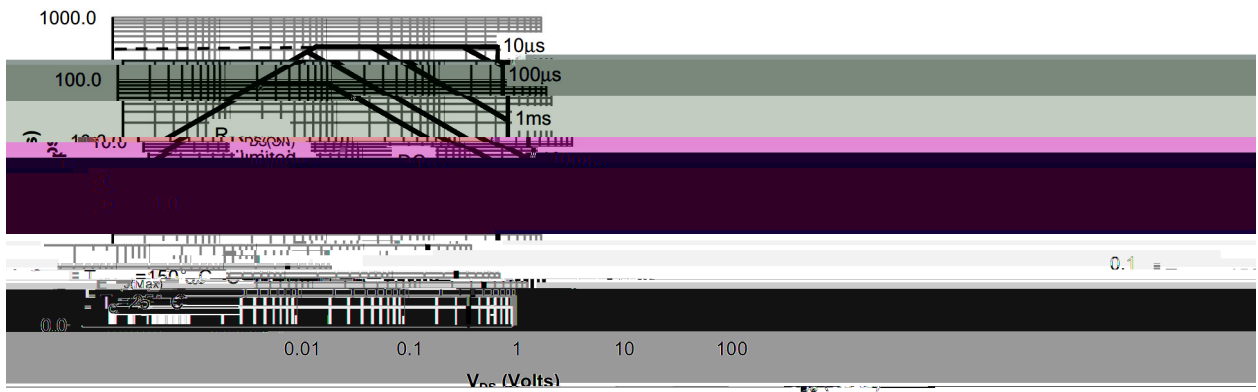


Figure 9: Maximum Gate-Drive Pulse Width Forward Biased Safe Operating Area

Quantities are in decimal units unless otherwise specified.

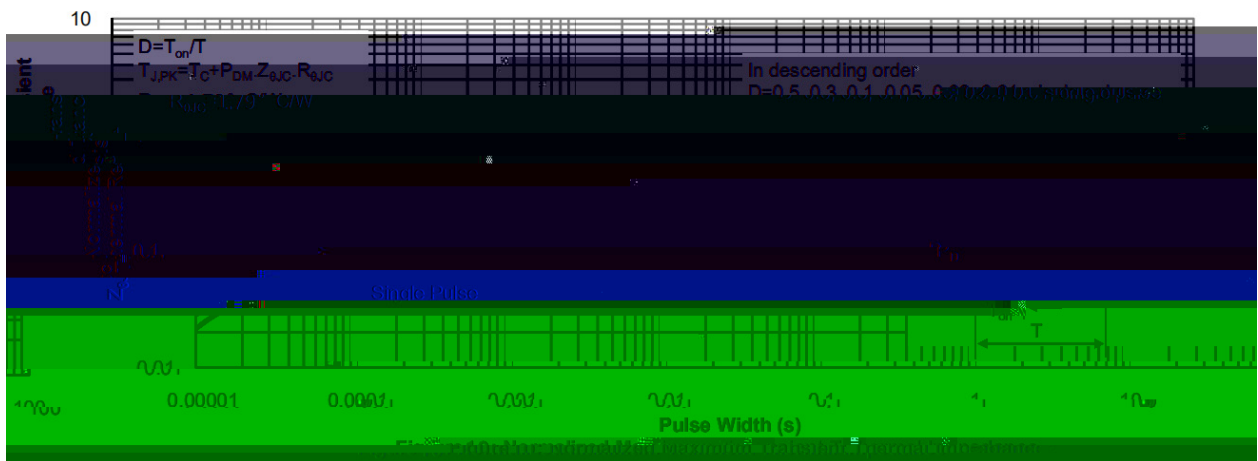


Figure 10: Single Pulse

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