"Yت / Descriptions

PDFN5×6 N

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

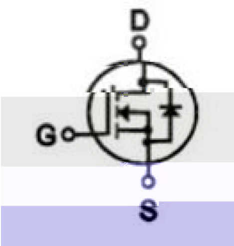
• È / Features

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

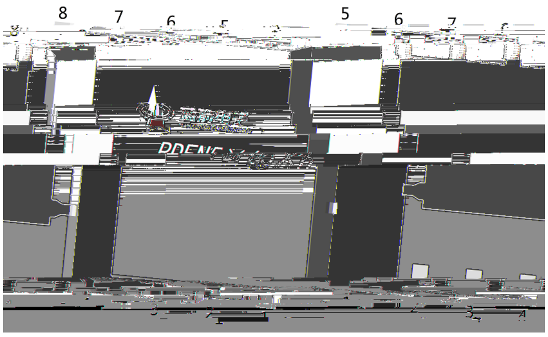
ﻴ ﻳ / Applications

Battery Management.

ﻟ ﻕ ﭐ ﻉ / Equivalent Circuit



ẫ ﻟ ű / Pinning



PIN1 2 3 S PIN4 G PIN5 6 7 8 D

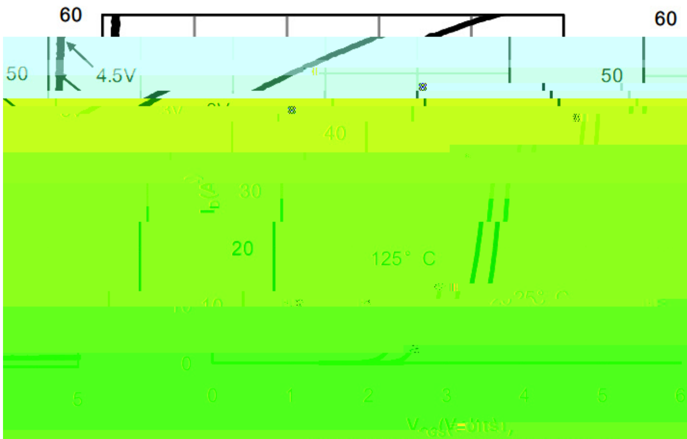
ŧ ӈ ﺑ / Marking

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	$P_D(T_c=25\ \ )$	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=250uA, V_{GS}=0V	40	46		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=40V, V_{GS}=0V			1.0	uA
Gate-Body leakage current	I_{GSS}	V_{DS}=0V, V_{GS}= ±20V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250uA	1	1.5	2.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=10V, I_D=20A		0.93	1.0	mΩ
		V_{GS}=4.5V, I_D=10A		1.28	2.0	
Input Capacitance	C_{iss}	V_{DS}=25V V_{GS}=0V f=1.0MHz		5800		pF
Output Capacitance	C_{oss}			1860		
Reverse Transfer Capacitance	C_{rss}			135		
Gate resistance	R_g	V_{GS}=0V V_{DS}=0V f=1MHz		1.0		Ω oss

Electrical Characteristic Curve



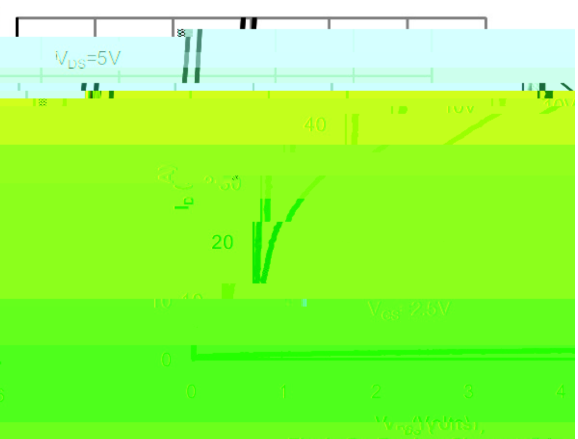
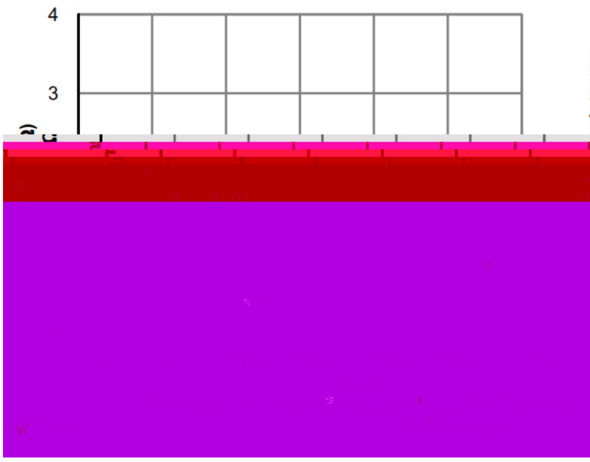
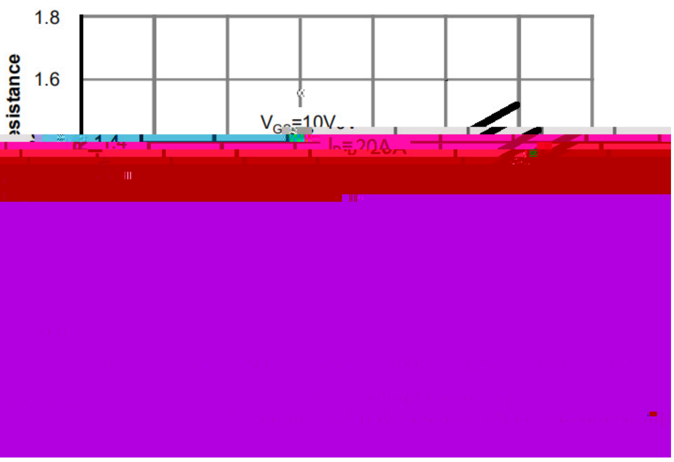
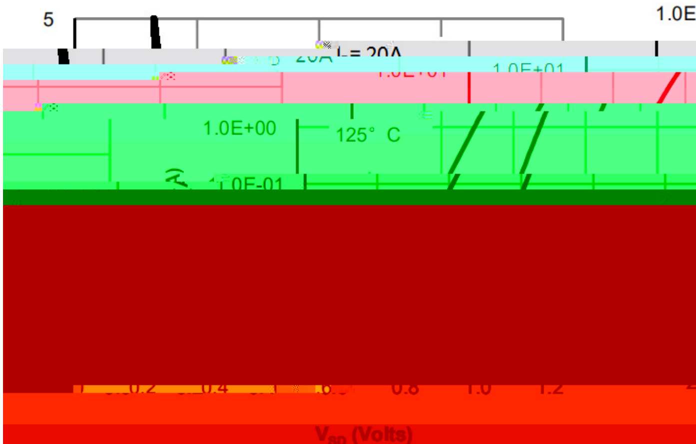


Figure 2: Transfer Characteristics

Fig.1: On-Region Characteristics







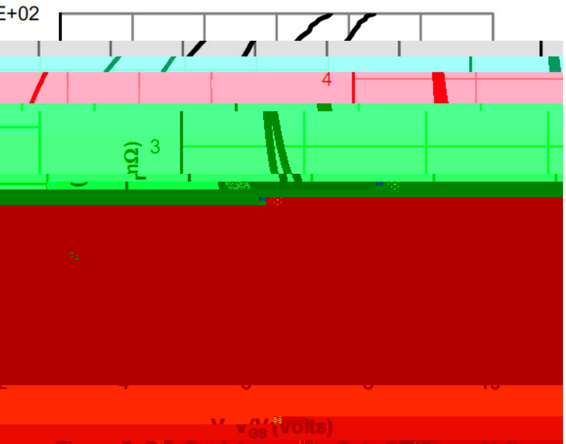


Figure 6: Body-Diode Characteristics

Figure 5: On-Resistance vs. Gate-Source Voltage

Electrical Characteristic Curve

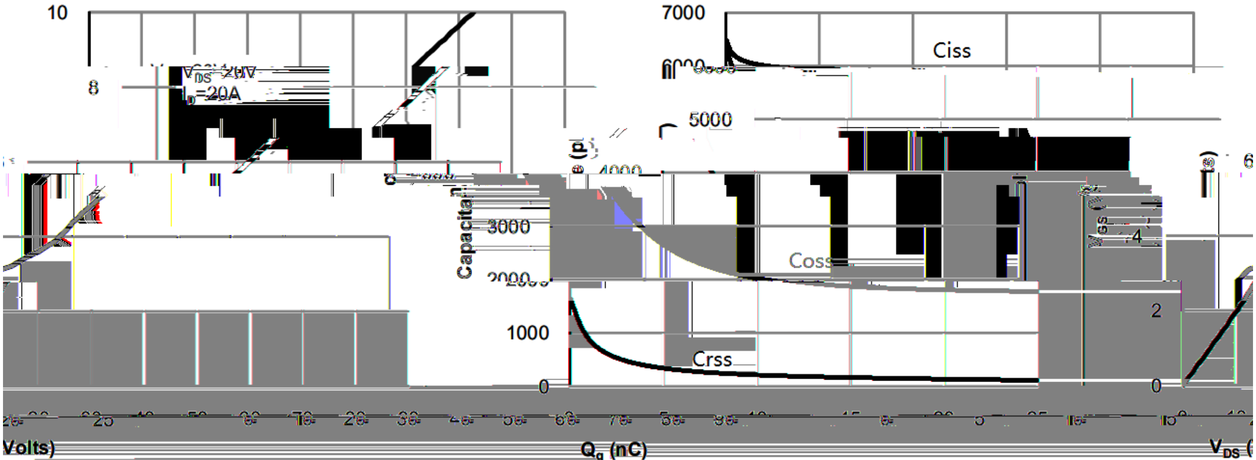


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Figure 7: Gate-Charge Characteristics

Figure 8: Capacita