

/ Descriptions

PDFN5 6 N

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

/ Features

$V_{DS}(V)=150V$ $I_D=21A$

$R_{DS(ON)}@10V \leq 45m\Omega$ (Typ.40m Ω)

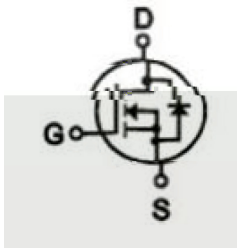
$R_{DS(ON)}@6V \leq 55m\Omega$ (Typ.45m Ω)

HF Product.

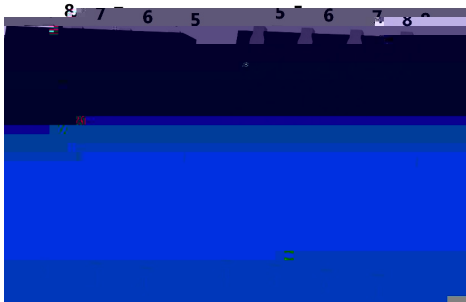
/ Applications

LCD TV appliances, High power inverter system, LCDM appliances.

/ Equivalent Circuit



/ Pinning



PIN1 2 3 S PIN4 G PIN5 6 7 8 D

/ Marking

See Marking Instructions.

BRCS450N15SHZC

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Parameter	Symbol		
Drain-Source Voltage	V_{DS}		
Continuous Drain Current	$I_D(T_c=25\text{ }^{\circ}\text{C})$		
	$I_D(T_c=100\text{ }^{\circ}\text{C})$	13.8	
Pulsed Drain Current*	I_{DM}	84	
Gate-Source Voltage	V_{GS}	± 20	V
Power Dissipation	$P_D(T_c=25\text{ }^{\circ}\text{C})$	50	W
Junction and Storage Temperature Range	T_j, T_{stg}	-55 to 150	$^{\circ}\text{C}$
Continuous-Source Current	I_S	21	A
Maximum Junction-to-Ambient**	$R_{\theta JA}$	50	/ W
Maximum Junction-to-Case**	$R_{\theta JC}$	2.5	

Notes

* Pulse width $\leq 300\text{ }\mu\text{s}$, duty cycle $\leq 2\%$

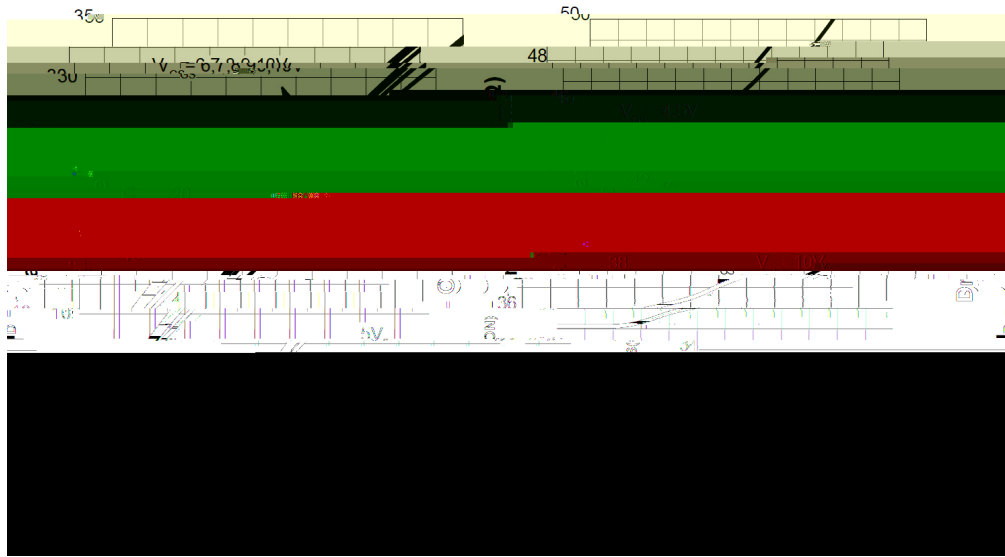
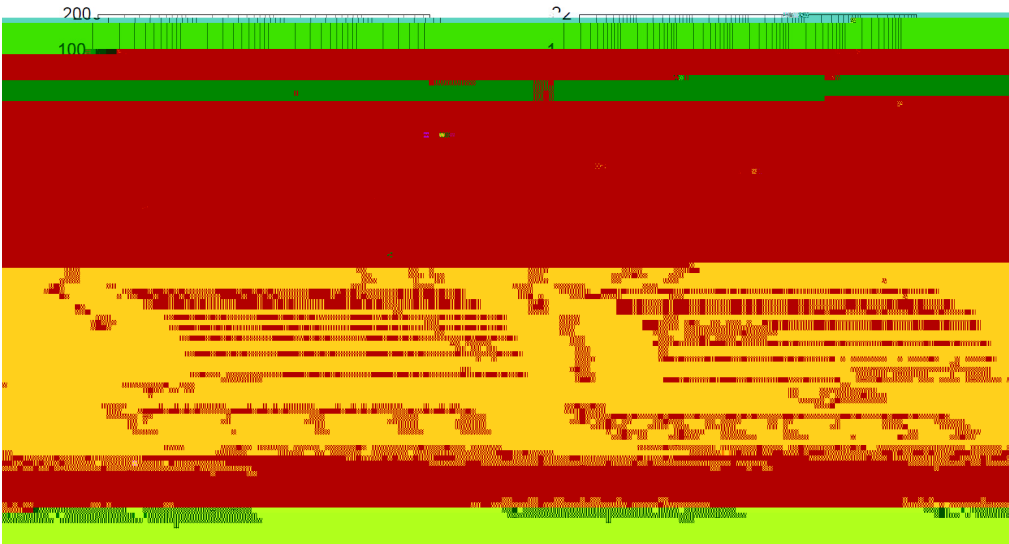
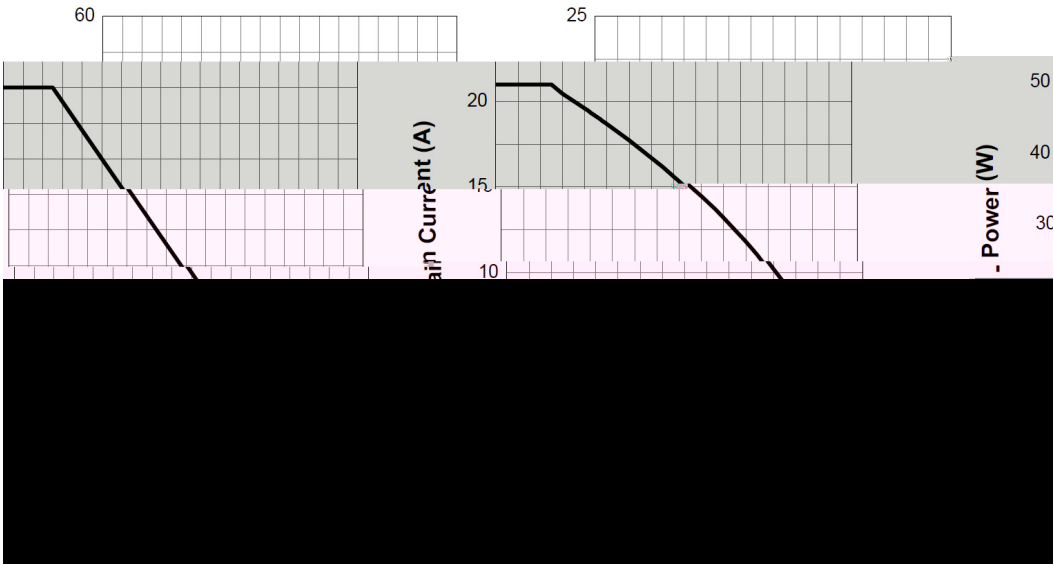
** Mounted on Large Heat Sink

Symbol Min

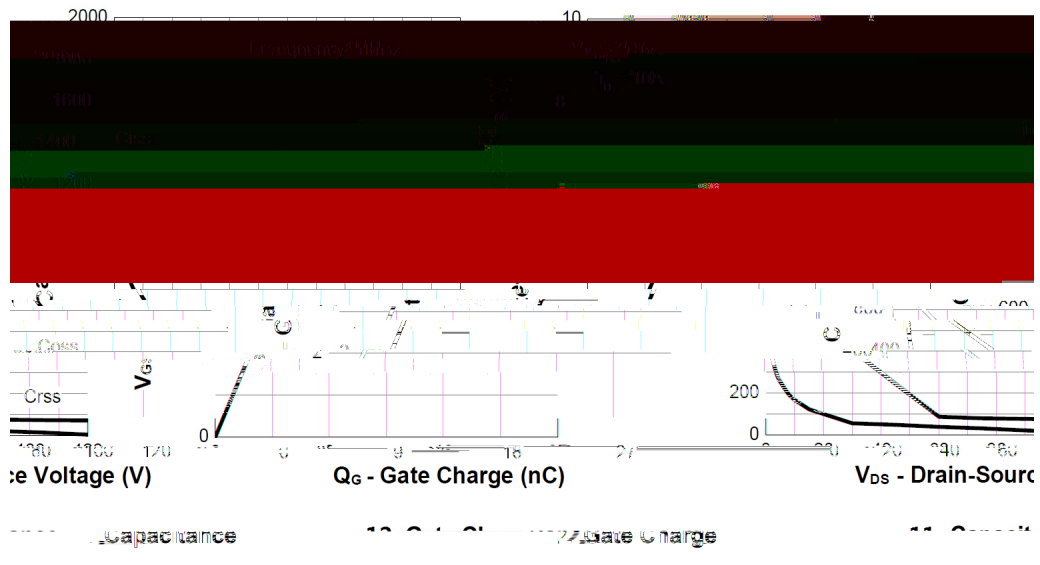
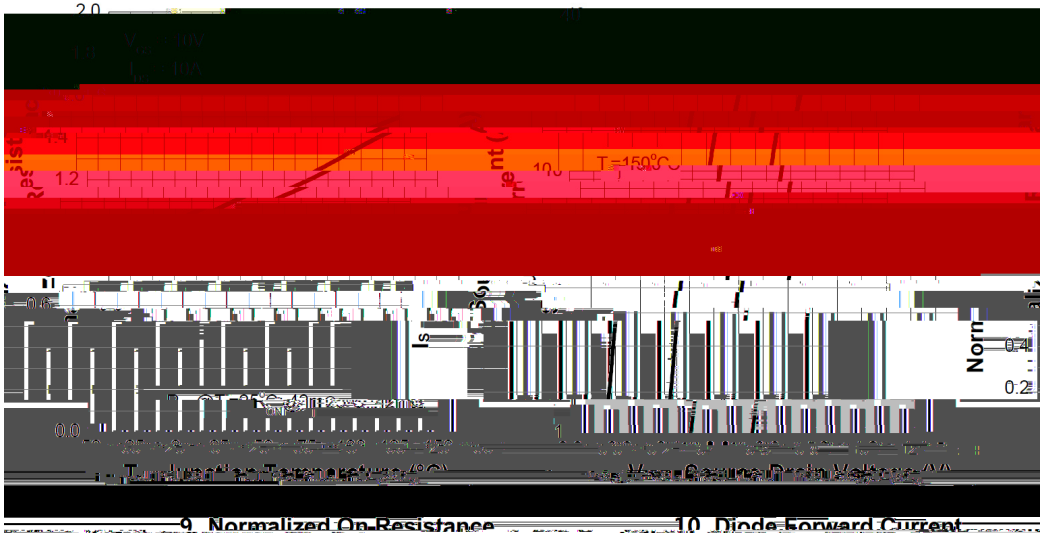
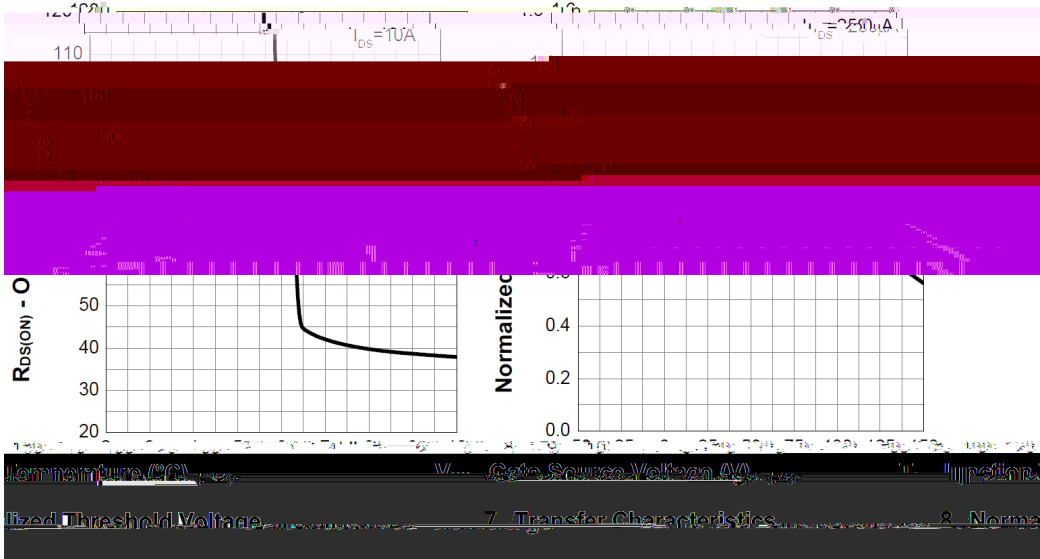

/ Electrical Characteristics(Ta=25 –)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	Q_g	$V_{GS}=10V$ $V_{DS}=75V$ $I_D=10A$		25.8		nC
Gate Source Charge	Q_{gs}			8		
Gate Drain Charge	Q_{gd}			8.3		
Turn-On Delay Time	$t_{d(on)}$	$V_{GEN}=10V$ $V_{DS}=75V$ $I_{DS}=10A$ $R_G=4.5\Omega$ $R_L=7.5\Omega$		11		ns
Turn-On Rise Time	t_r			40		
Turn-Off Delay Time	$t_{d(off)}$			19		
Turn-Off Fall Time	t_f			32		

/ Electrical Characteristic Curve



/ Electrical Characteristic Curve



/ Marking Instructions



450N15SH

Note:

BR: Company Code

450N15SH: Product Type Code

****: Lot No. Code, code change with Lot No.

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