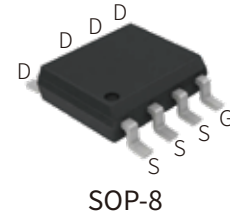


FEATURES

| High frequency DC-DC converters

| Lead-Free

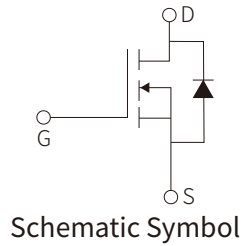


APPLICATION

| LCD TV appliances

| LCDM appliances

| High power inverter system



APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Drain-to-Source Voltage		V_{DS}	85	V
Continuous Drain Current, V_{GS} @ 10V $T_c = 25^\circ\text{C}$		I_D	30	A
Pulsed Drain Current		I_{DM}	164	A
Gate-Source Voltage		V_{GS}	± 20	V
Maximum Power Dissipation	$T_c = 25^\circ\text{C}$	P_D	2.5	W
	$T_c = 70^\circ\text{C}$		1.6	W
Thermal Resistance from Junction to Ambient		$R_{\theta JA}$	50	$^\circ\text{C/W}$
Junction Temperature		T_J	-55 to 150	$^\circ\text{C}$
Storage Temperature Range		T_{STG}	-55 to 150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Static Characteristics						
Drain-source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V, I_D=250\mu A$	85			V
Gate-body leakage current	I_{GSS}	$V_{DS}=\pm 20V, V_{GS}=0V$			± 100	nA
Zero gate voltage drain current	I_{DSS}	$V_{DS}=85V, V_{GS}=0V$			1	μA
Gate-source threshold voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	2.4	3	3.6	V
Drain-source on-state resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=20A$		11	14.5	m Ω
Dynamic characteristics						
Input capacitance	C_{iss}	$V_{DS}=25V, V_{GS}=0V, f=1MHz$		1510		pF
Output capacitance	C_{oss}			320		pF
Reverse transfer capacitance	C_{rss}			130		pF
Switching characteristics						
Turn-on delay time	$t_{d(on)}$	$V_{DD}=40V, I_D=5.6A$ $V_{GS}=10V, R_G=6.2\Omega$		8.3		ns
Turn-on Rise Time	t_r			7.5		ns
Turn-Off Delay Time	$t_{d(off)}$			30		ns
Turn-off Fall yime	t_f			12		ns
Total Gate Charge	Q_{gs}	$V_{DS}=40V, I_D=5.6A$ $V_{GS}=10V$		35	53	nC
Gate-Source Charge	Q_{gs}			5.7		nC
Gate-Drain Charge	Q_{gd}			12		nC
Source-Drain diode characteristics						
Drain to Source Diode Forward Voltage	V_{SD}	$I_S=5.6A, V_{GS}=0V$			1.3	V

PARAMETER CHARACTERISTIC CURVE

Figure1: Typical Output Characteristics

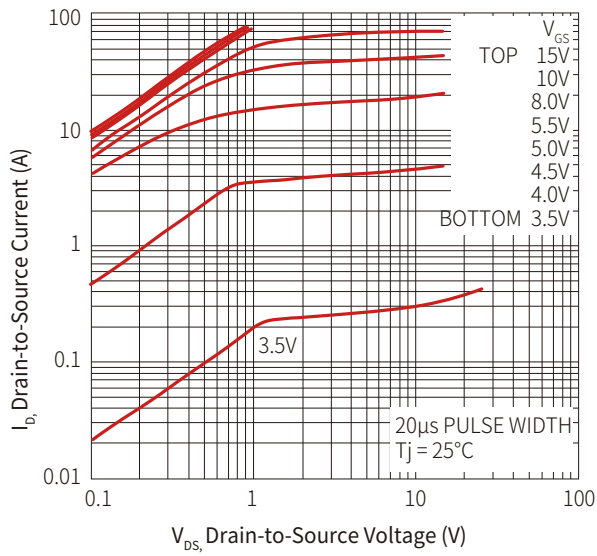


Figure2: Typical Output Characteristics

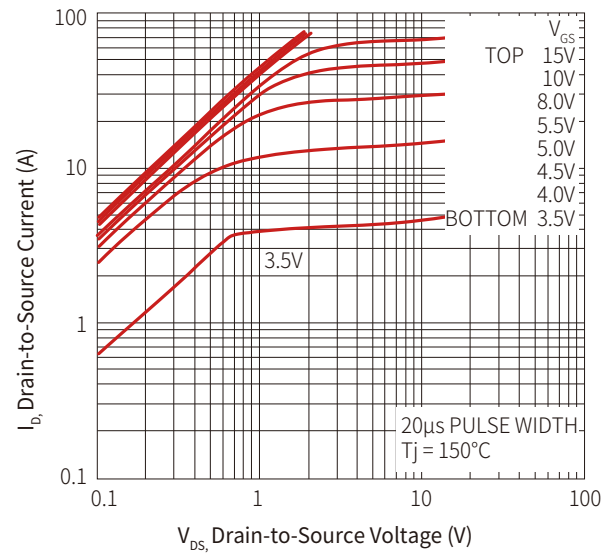


Figure3: Typical Transfer Characteristics

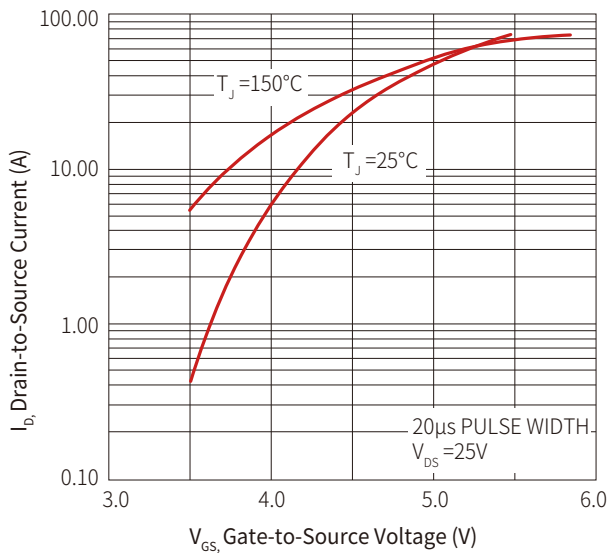
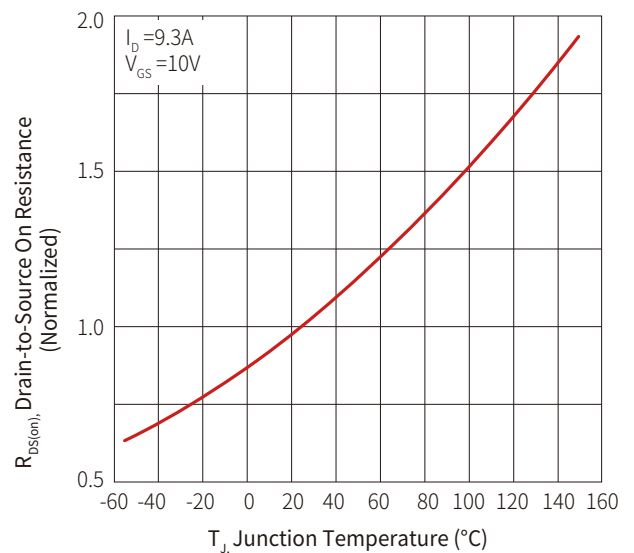


Figure 4: Normalized On-Resistance Vs. Temperature



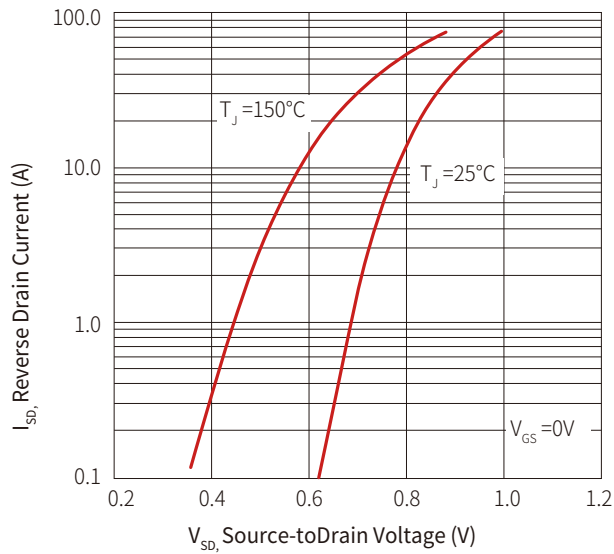
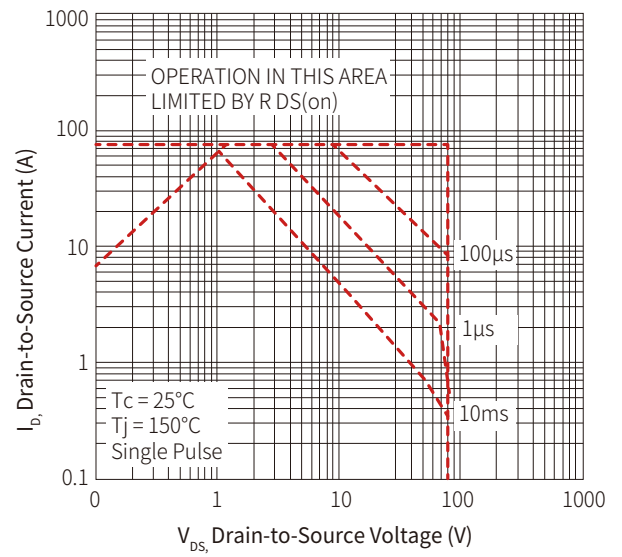
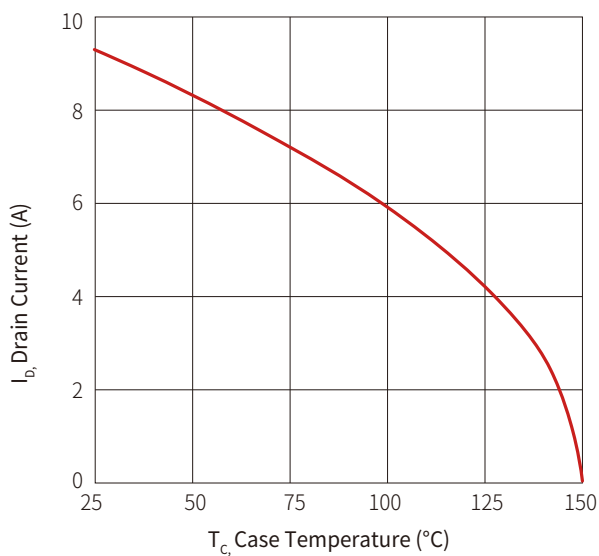
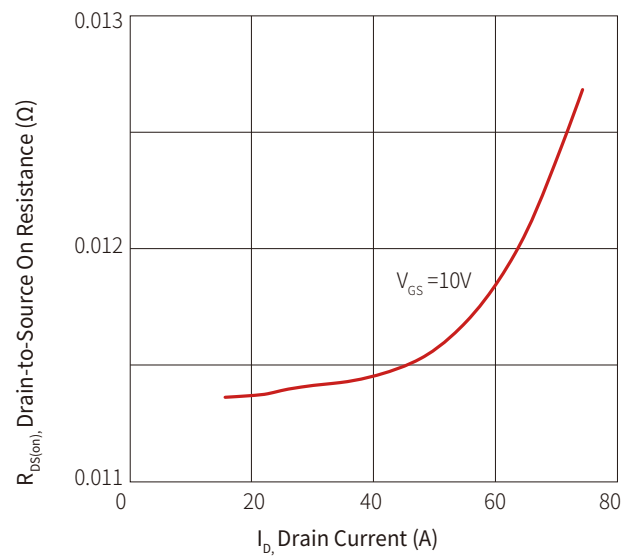
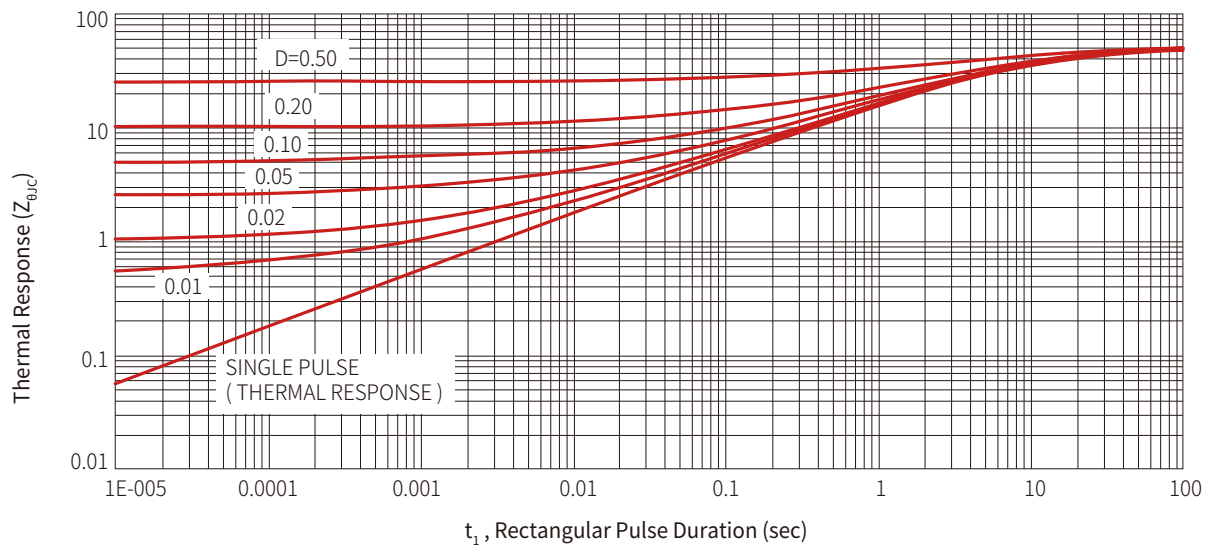
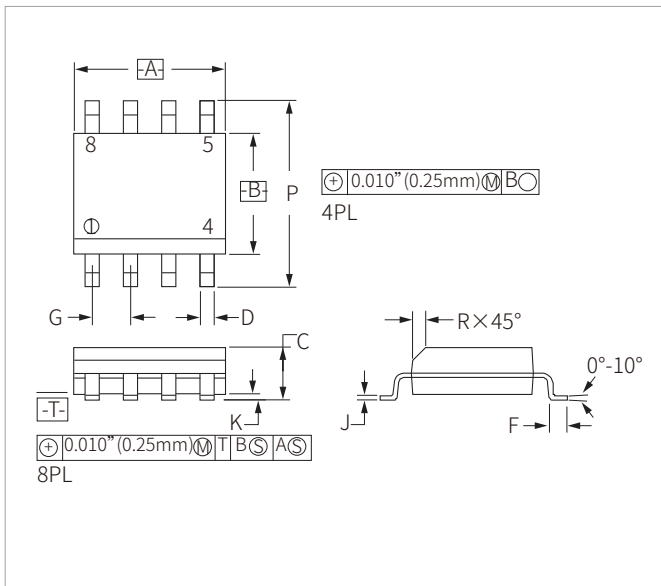
**Figure 5: Typical Source-Drain Diode Forward Voltage****Figure 6: Maximum Safe Operating Area****Figure 7: Maximum Drain Current Vs. Ambient Temperature****Figure 8: On-Resistance Vs. Drain Current**

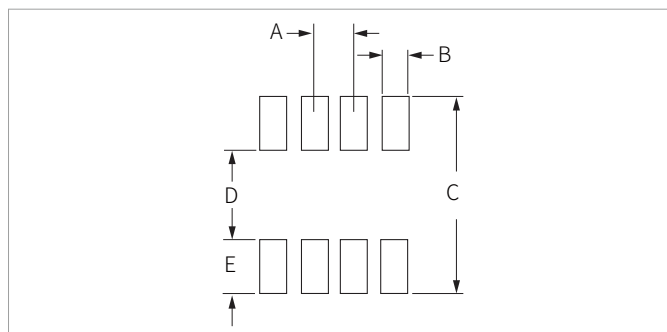
Figure 9: Maximum Effective Transient Thermal Impedance, Junction-to-Ambient


SOP-8 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.70	5.30	0.185	0.209
B	3.80	4.20	0.150	0.165
C	1.35	1.75	0.054	0.068
D	0.35	0.49	0.014	0.019
F	0.40	1.25	0.016	0.049
G	1.27BSC		0.050BSC	
J	0.18	0.25	0.007	0.009
K	0.10	0.25	0.004	0.008
P	5.80	6.20	0.229	0.244
R	0.25	0.50	0.010	0.019

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min	Max	Min	Max
A	1.14	1.40	0.045	0.055
B	0.64	0.89	0.025	0.035
C	6.22	-	0.245	-
D	3.94	4.17	0.155	0.165
E	1.02	1.27	0.040	0.050

ORDERING INFORMATION

Part Number	Component Package	Marking	QTY/Reel	Reel Size
SNM30N08PE	SOP-8	 30N08 XXXX	3000PCS	7"

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