Elektronische Bauelemente

SSP7466N

20A, 60V, $R_{DS(ON)}$ 6mΩ

N-Channel Enhancement Mode Power MOSFET

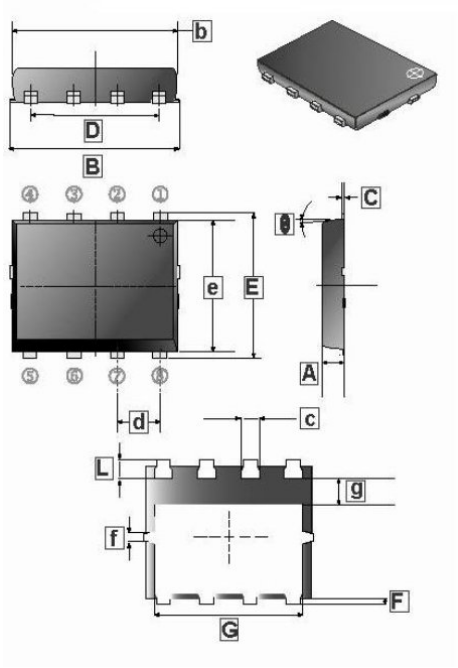
RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

DESCRIPTION

SSP7466N uses advanced trench technology and design to provide excellent $R_{DS(ON)}$ with low gate charge. It can be used in a wide variety of applications.

SOP-8PP



FEATURES

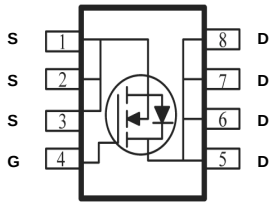
- Low $R_{DS(ON)}$ trench technology
- Low thermal resistance
- Fast switching speed

APPLICATIONS

- White LED boost converter
- Automotive systems
- Industrial DC/DC conversion circuits

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOP-8PP	3K	13 inch



REF.	Millimeter Min.	Millimeter Max.	REF.	Millimeter Min.	Millimeter Max.
A	0.80	1.00	θ	0°	10°
B	5.3 BSC.		b	5.2 BCS	
C	0.15	0.25	c	0.20	0.50
D	3.8 BCS.		d	1.27BSC	
E	6.05 BCS.		e	5.65 BCS.	
F	0.03	0.30	f	0.10	0.40
G	4.35 BCS.		g	1.3 BCS.	
L	0.40	0.70			

ABSOLUTE MAXIMUM RATINGS (T_A=25℃ unless otherwise specified)

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	60	V
Gate-Source Voltage		V_{GS}	±20	V
Continuous Drain Current [1]	T_A=25℃	I_D	20	A
	T_A=70℃		19	
Pulsed Drain Current [2]		I_{DM}	100	A
Continuous Source Current(Diode Conduction) [1]		I_S	5	mJ
Power Dissipation [1]	T_A=25℃	P_D	3.5	W
	T_A=70℃		3.2	
Maximum Thermal Resistance from Junction to Ambient [1]	t≦10sec	$R_{\theta JA}$	35	℃ / W
	Steady State		65	
Operating Junction and Storage Temperature Range		T_J, T_{STG}	150, -55~150	℃

Notes:

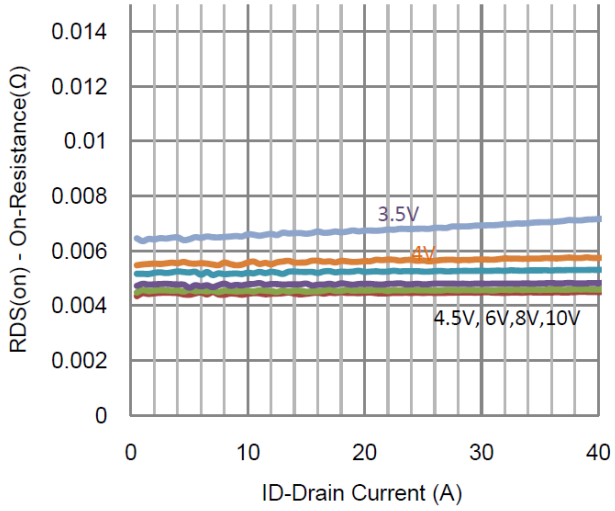
1. The surface of the device is mounted on a 1" × 1" FR4 board.
2. Pulse width is limited by the maximum junction temperature.

ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise specified)

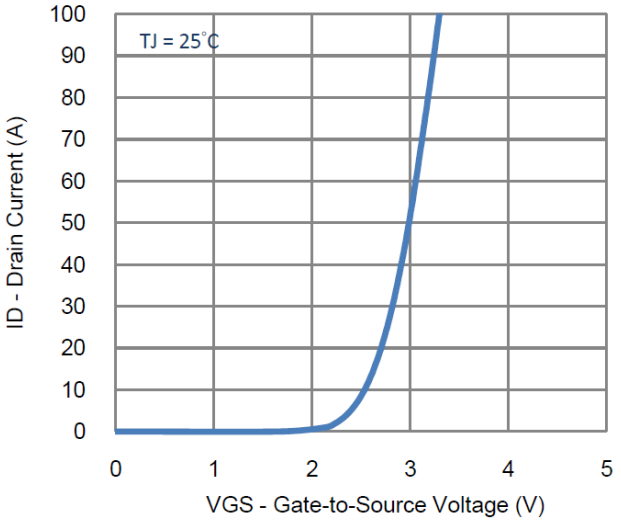
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Static Characteristics						
Gate-Threshold Voltage	$V_{GS(th)}$	1	-	-	V	V_{DS}=V_{GS}, I_D=250μA
Gate-Body Leakage Current	I_{GSS}	-	-	±10	μA	V_{DS}=0V, V_{GS}= ±20V
Zero Gate Voltage Drain Current	I_{DSS}	-	-	1	μA	V_{DS}=48V, V_{GS}=0
		-	-	5		V_{DS}=48V, V_{GS}=0, T_J=55℃
On-State Drain Current	$I_{D(ON)}$	10	-	-	A	V_{DS}=5V, V_{GS}=10V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	-	-	6	mΩ	V_{GS}=10V, I_D=16A
		-	-	7		V_{DS}=4.5V, I_D=15A
Forward Transconductance	g_{fs}	-	10	-	S	V_{DS}=15V, I_D=16A
Diode Forward Voltage	V_{SD}	-	0.66	-	V	V_{GS}=0, I_S=2.5A
Dynamic Characteristics						
Total Gate Charge	Q_g	-	64	-	nC	V_{DS}=30V V_{GS}=4.5V I_D=16A
Gate-Source Charge	Q_{gs}	-	21	-		
Gate-Drain Charge	Q_{gd}	-	30	-		
Turn-on Delay Time	$T_{d(on)}$	-	17	-	nS	V_{DD}=30V V_{GEN}=10V R_L=1.8Ω R_{GEN}=6Ω I_D=16A
Rise Time	T_r	-	53	-		
Turn-off Delay Time	$T_{d(off)}$	-	223	-		
Fall Time	T_f	-	77	-		
Input Capacitance	C_{iss}	-	4045	-	pF	V_{DS}=15V V_{GS}=0 f=1MHz
Output Capacitance	C_{oss}	-	592	-		
Reverse Transfer Capacitance	C_{rss}	-	513	-		

Notes:
1. Pulse test : Pulse width≦300μs, duty cycle≦2%.

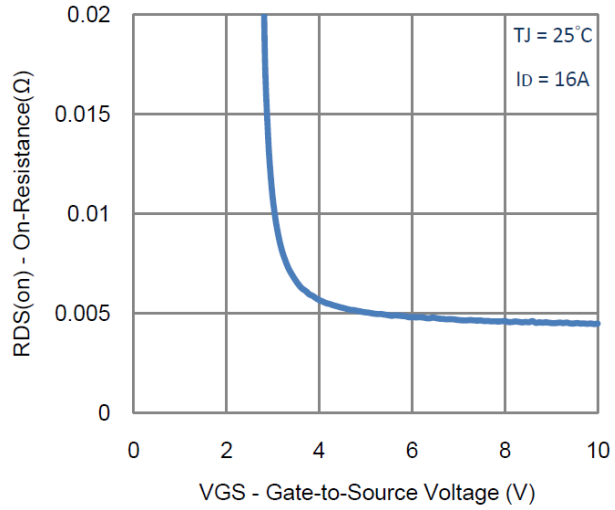
CHARACTERISTICS CURVE



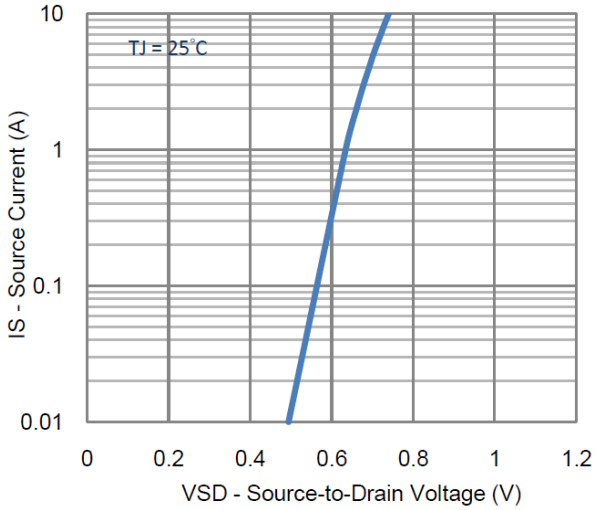
1. On-Resistance vs. Drain Current



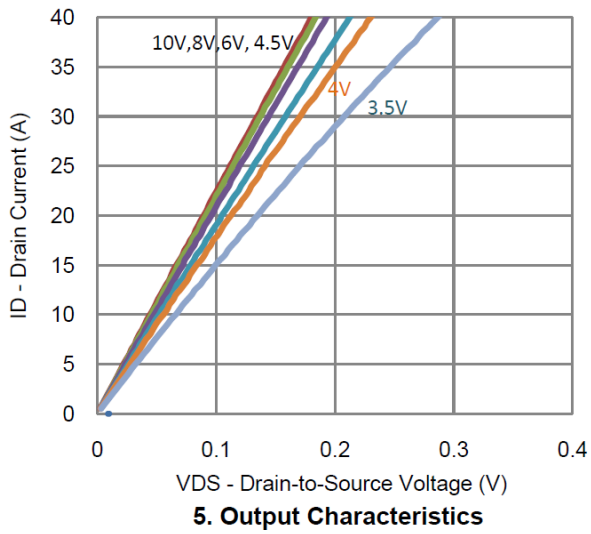
2. Transfer Characteristics



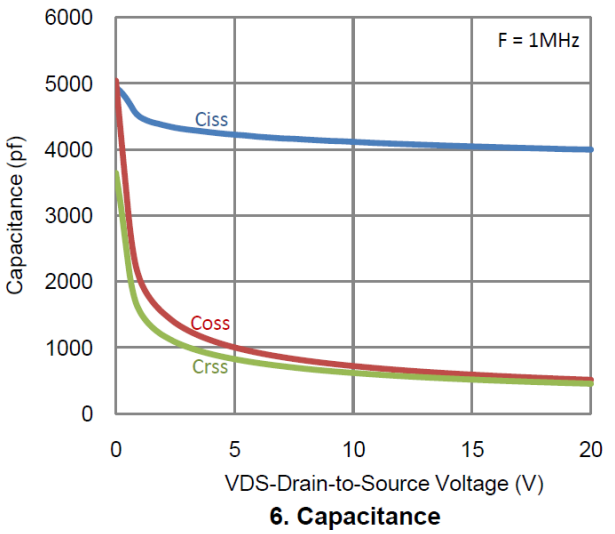
3. On-Resistance vs. Gate-to-Source Voltage



4. Drain-to-Source Forward Voltage

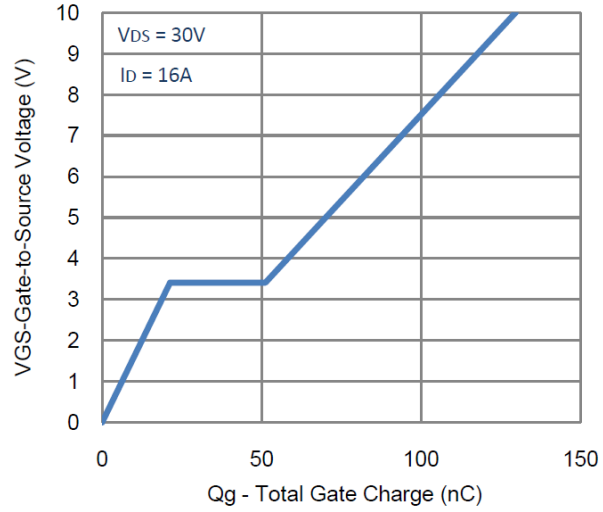


5. Output Characteristics

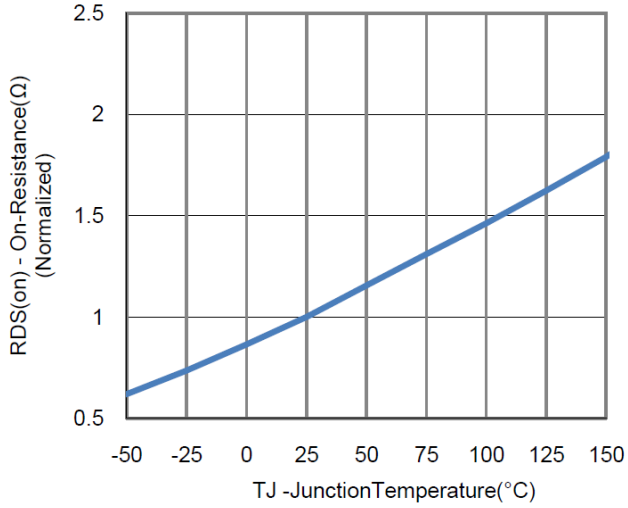


6. Capacitance

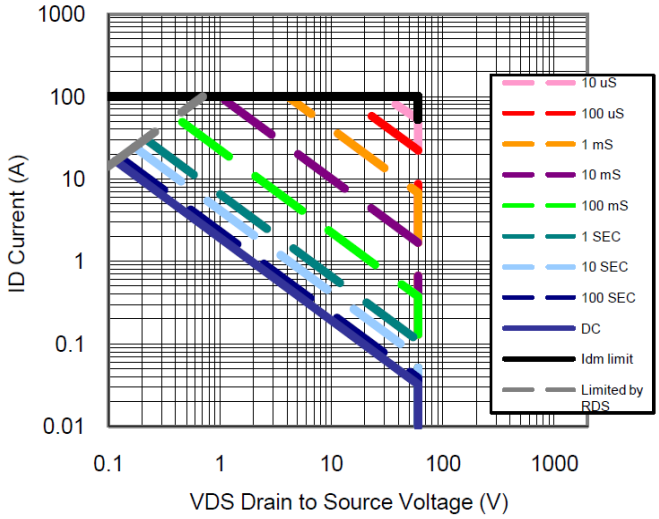
CHARACTERISTICS CURVE



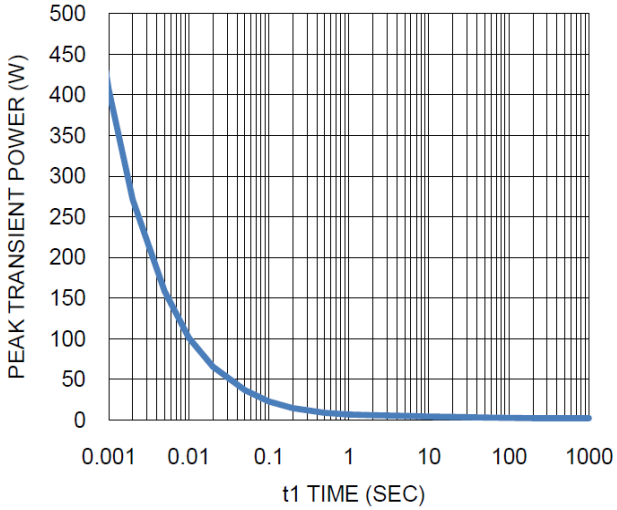
7. Gate Charge



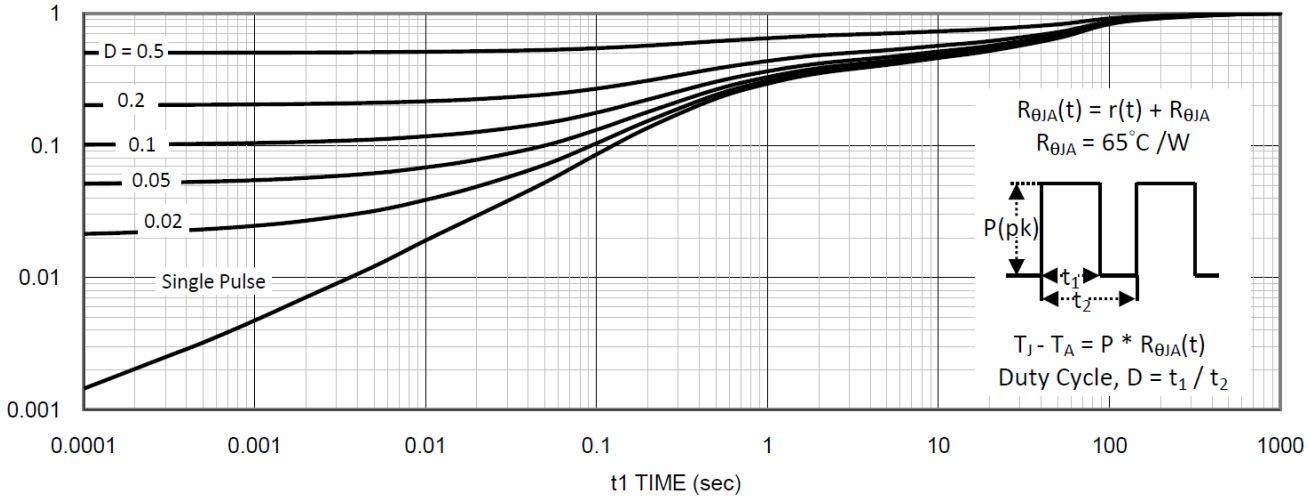
8. Normalized On-Resistance Vs Junction Temperature



9. Safe Operating Area



10. Single Pulse Maximum Power Dissipation



11. Normalized Thermal Transient Junction to Ambient