

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

DESCRIPTION

The SSG7328J uses advanced trench technology to provide excellent on-resistance, low gate charge and operation with gate voltages as low as 2.5V. The device is suitable for use as a load switch or in PWM applications. It may be used in a common drain arrangement to a bidirectional blocking switch.

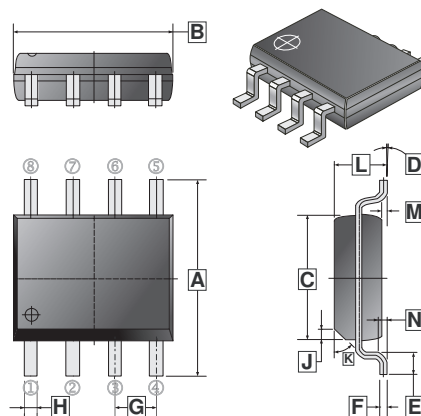
FEATURES

- Simple Drive Requirement
- Lower On-resistance
- Low Gate Charge

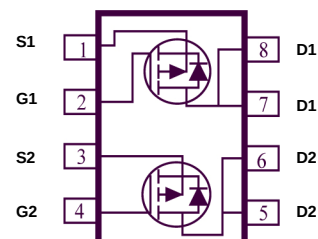
PACKAGE INFORMATION

Package	MPQ	Leader Size
SOP-8	4K	13"

SOP-8



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	5.80	6.20	H	0.35	0.49
B	4.80	5.00	J	0.375	REF.
C	3.80	4.00	K	45°	
D	0°	8°	L	1.35	1.75
E	0.40	0.90	M	0.10	0.25
F	0.19	0.25	N	0.25	REF.
G	1.27	TYP.			



MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	-8	A
Pulsed Drain Current ¹	I_{DM}	-32	A
Power Dissipation ²	P_D	1.4	W
Operating Junction & Storage Temperature Range	T_J, T_{STG}	150, -55 ~ 150	$^\circ\text{C}$
Thermal Resistance Ratings			
Thermal Resistance Junction-ambient ²	$R_{\theta JA}$	89	$^\circ\text{C} / \text{W}$

ELECTRICAL CHARACTERISTICS ($T_J = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test condition
Drain-Source Breakdown Voltage	BV_{DSS}	-30	-	-	V	$V_{GS}=0V, I_D = -250\mu A$
Gate Threshold Voltage	$V_{GS(th)}$	-1	-	-2.5	V	$V_{DS}=V_{GS}, I_D = -250\mu A$
Forward Transconductance	g_{fs}	12	-	-	S	$V_{DS}= -10V, I_D = -8A$
Gate-Source Leakage Current	I_{GSS}	-	-	±100	nA	$V_{DS}= 0V, V_{GS}= \pm 20V$
Zero Gate Voltage Drain Current	I_{DSS}	-	-	-15	μA	$V_{DS}= -24V, V_{GS}=0V$
Static Drain-Source On-Resistance ³	$R_{DS(ON)}$	-	-	21	mΩ	$V_{GS}= -10V, I_D= -8A$
		-	-	32		$V_{GS}= -4.5V, I_D= -6.8A$
Dynamic Characteristics ⁴						
Total Gate Charge	Q_g	-	78	-	nC	$V_{DS}= -15V,$ $I_D = -8A,$ $V_{GS}= -10V$
Gate-Source Chagre	Q_{gs}	-	9.8	-		
Gate-Drain (“Miller”) Change	Q_{gd}	-	8.3	-		
Turn-on Delay Time	$T_{d(ON)}$	-	20	-	nS	$V_{DD}= -15V,$ $V_{GS}= -10V$ $R_D=15\Omega,$ $I_D= -1A,$ $R_G=6\Omega$
Rise Time	T_r	-	23	-		
Turn-off Delay Time	$T_{d(OFF)}$	-	297	-		
Fall Time	T_f	-	147	-		
Input Capacitance	C_{ISS}	-	2675	-	pF	$V_{DS}= -25V$ $V_{GS}=0V$ $f=1.0MHz$
Output Capacitance	C_{OSS}	-	409	-		
Reverse Transfer Capacitance	C_{RSS}	-	262	-		
Source-Drain Diode						
Diode Forward Voltage ³	V_{SD}	-	-	-1.2	V	$I_S= -2A, V_{GS}=0V$

Notes :

1. Repetitive rating: Pulse width limited by junction temperature.
2. Surface mounted on 1"×1" FR4 board, $t \leq 10s$
3. Pulse Test: Pulse width $\leq 300\mu s$, Duty cycle $\leq 2\%$
4. Guaranteed by design, not subject to production testing.

CHARACTERISTIC CURVES

