Elektronische Bauelemente

SST8810J-C

7A, 20V, $R_{DS(ON)}$ 20mΩ

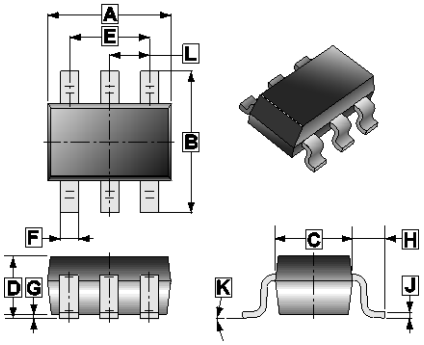
Dual N-Ch Enhancement Mode Power MOSFET

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

DESCRIPTION

SST8810J-C uses advanced trench technology to provide excellent $R_{DS(ON)}$ and low gate charge. It is protected by ESD. This device is suitable for the use as a uni-directional or bi-directional load switch, facilitated by its common-drain configuration.

SOT-26



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.70	3.10	G	0	0.10
B	2.60	3.00	H	0.60 REF.	
C	1.40	1.80	J	0.12 REF.	
D	-	1.30	K	0°	10°
E	1.90 REF.		L	0.95 REF.	
F	0.25	0.50			

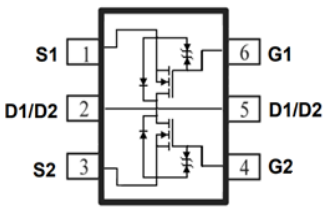
MARKING

PACKAGE INFORMATION

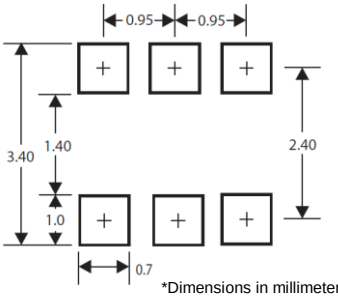
Package	MPQ	Leader Size
SOT-26	3K	7 inch

ORDER INFORMATION

Part Number	Type
SST8810J-C	Lead (Pb)-free and Halogen-free



Mounting Pad Layout



*Dimensions in millimeters

ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	±12	V
Continuous Drain Current	I_D	7	A
Pulsed Drain Current [1]	I_{DM}	30	A
Lead Temperature for Soldering Purposes @1/8'' from case for 10s	T_L	260	°C
Junction and Storage Temperature Range	T_J, T_{STG}	150, -55~150	
Thermal Data			
Thermal Resistance from Junction-Ambient	$R_{\theta JA}$	83.3	°C/W

Note:
1. Repetitive rating: pulse width is limited by the junction temperature.

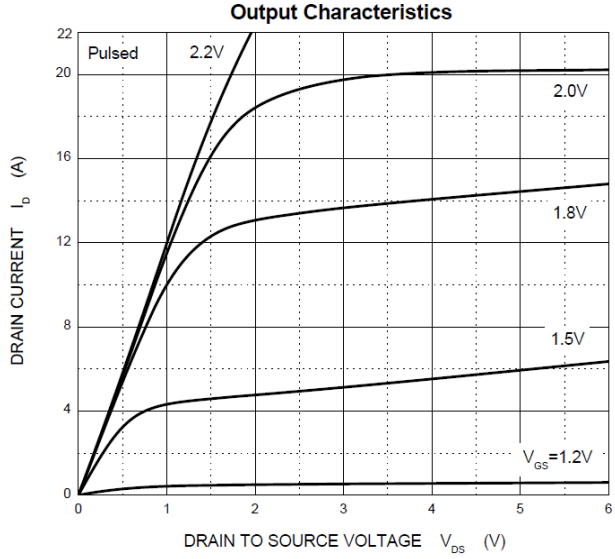
ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Drain-Source Breakdown Voltage	BV_{DSS}	20	-	-	V	V_{GS}=0, I_D=250μA
Gate-Threshold Voltage [1]	$V_{GS(th)}$	0.4	-	1	V	V_{DS}=V_{GS}, I_D=250μA
Forward Transconductance [1]	g_{fs}	9	-	-	S	V_{DS}=5V, I_D=7A
Drain-Source Leakage Current	I_{DSS}	-	-	1	μA	V_{DS}=16V, V_{GS}=0
Gate-Body Leakage Current	I_{GSS}	-	-	±1	μA	V_{DS}=0V, V_{GS}=±4.5V
		-	-	±10		V_{DS}=0V, V_{GS}=±8V
Drain-Source On-Resistance [1]	$R_{DS(ON)}$	-	-	20	mΩ	V_{GS}=10V, I_D=7A
		-	-	22		V_{GS}=4.5V, I_D=6.6A
		-	-	24		V_{GS}=3.8V, I_D=6A
		-	-	26		V_{GS}=2.5V, I_D=5.5A
		-	-	35		V_{GS}=1.8V, I_D=5A
Diode Forward Voltage [1]	V_{SD}	-	-	1	V	I_S=1A, V_{GS}=0
Total Gate Charge	Q_g	-	15	-	nC	V_{DS}=10V V_{GS}=4.5V I_D=7A
Gate-Source Charge	Q_{gs}	-	0.8	-		
Gate-Drain (“Miller”) Charge	Q_{gd}	-	3.2	-		
Turn-on Delay Time	$T_{d(on)}$	-	6	-	nS	V_{DD}=10V V_{GS}=5V R_L=1.35Ω R_{GEN}=3Ω
Rise Time	T_r	-	13	-		
Turn-off Delay Time	$T_{d(off)}$	-	52	-		
Fall Time	T_f	-	16	-		
Input Capacitance	C_{iss}	-	1150	-	pF	V_{DS}=10V V_{GS}=0 f=1MHz
Output Capacitance	C_{oss}	-	185	-		
Reverse Transfer Capacitance	C_{rss}	-	145	-		

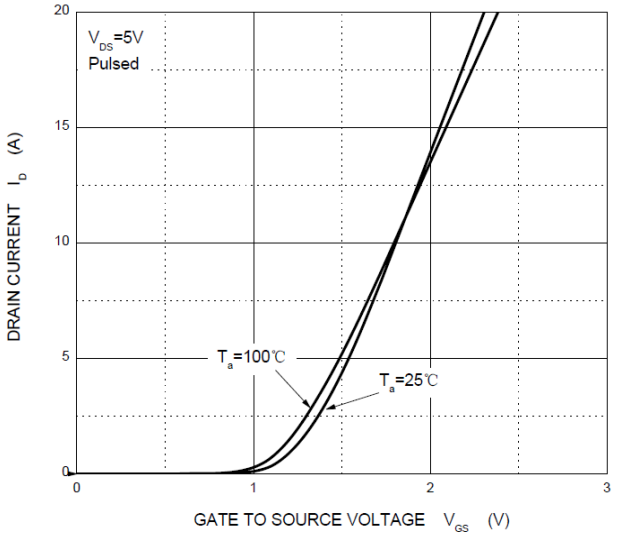
Note:
1. Pulse test: pulse width≤300μs, duty cycle≤0.5%.

CHARACTERISTIC CURVES

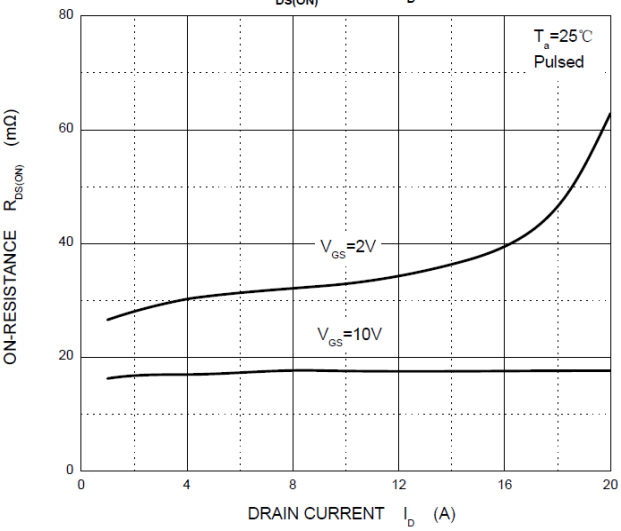
Output Characteristics



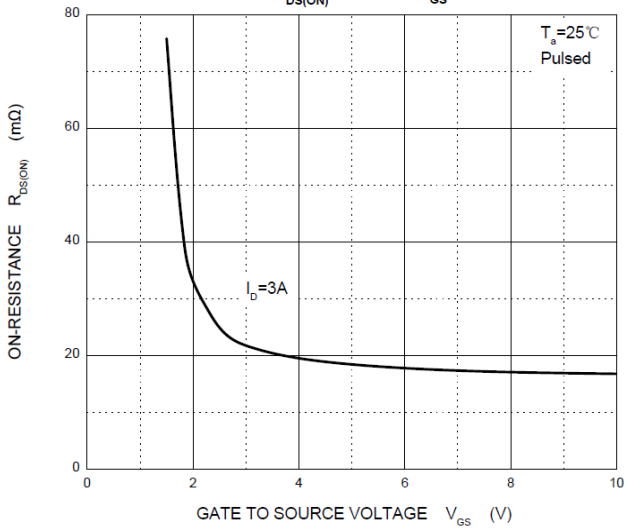
Transfer Characteristics



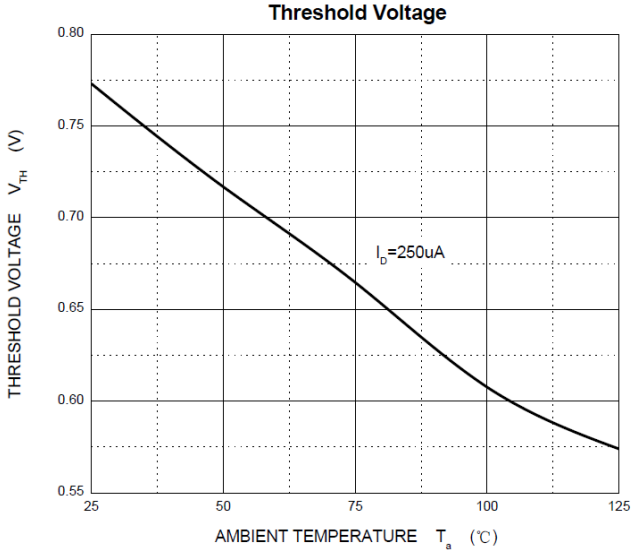
$R_{DS(ON)}$ — I_D



$R_{DS(ON)}$ — V_{GS}



Threshold Voltage



I_S — V_{SD}