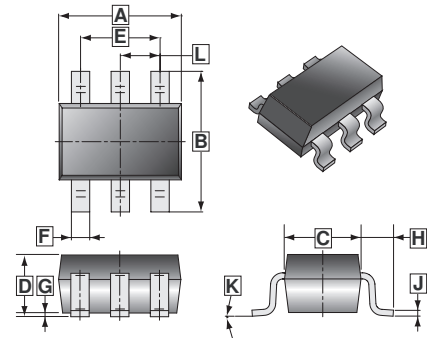


RoHS Compliant Product
 A suffix of "-C" specifies halogen and lead-free

DESCRIPTION

SST2301J utilizes advanced processing techniques to achieve the lowest possible on-resistance, extremely efficient and cost-effectiveness device. SOT-26 package is universally used for all commercial-industrial applications.

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	MAX.	K	0°	10°
E	1.90	REF.	L	0.95	REF.
F	0.30	0.50			

FEATURES

- TrenchFET power MOSFET

APPLICATIONS

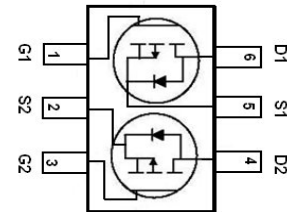
- DC/DC converter
- Load switch for portable devices

MARKING



PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-26	3K	7 inch



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}	±8	V
Continuous Drain Current	I _D	-2.3	A
Pulsed Drain Current	I _{DM}	-10	A
Power Dissipation	P _D	0.35	W
Junction and Storage Temperature Range	T _J , T _{STG}	150, -55~150	°C
Thermal Resistance Rating			
Thermal Resistance from Junction to Ambient	R _{θJA}	357	°C / W

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

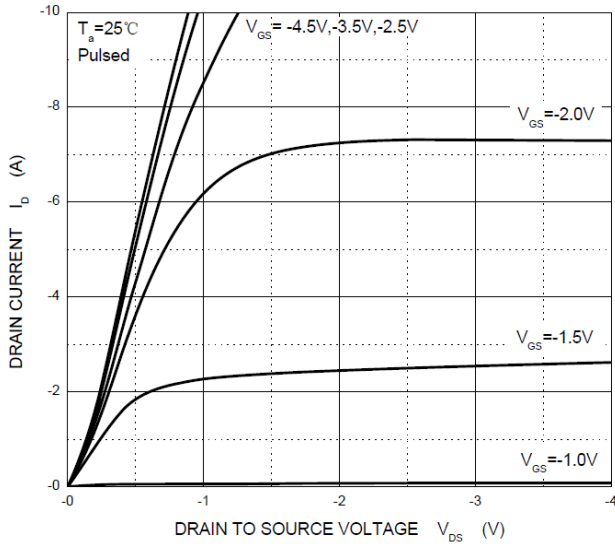
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition	
Static							
Drain-Source Breakdown Voltage	BV_{DSS}	-20	-	-	V	$V_{GS}=0, I_D = -250\mu\text{A}$	
Drain-Source Leakage Current	I_{DSS}	-	-	-1	μA	$V_{DS} = -20\text{V}, V_{GS}=0$	
Gate-Body Leakage Current	I_{GSS}	-	-	± 100	nA	$V_{DS}=0\text{V}, V_{GS}= \pm 8\text{V}$	
Gate-Threshold Voltage ¹	$V_{GS(th)}$	-0.4	-0.7	-1	V	$V_{DS}=V_{GS}, I_D = -250\mu\text{A}$	
Drain-Source On-Resistance ¹	$R_{DS(ON)}$	-	58	90	m Ω	$V_{GS} = -4.5\text{V}, I_D = -2.5\text{A}$	
		-	80	125		$V_{GS} = -2.5\text{V}, I_D = -2\text{A}$	
		-	120	200		$V_{GS} = -1.8\text{V}, I_D = -1.6\text{A}$	
Forward Transconductance ¹	g_{fs}	4	-	-	S	$V_{DS} = -5\text{V}, I_D = -2.8\text{A}$	
Diode Forward Voltage ¹	V_{SD}	-	-	-1.2	V	$I_S = -0.7\text{A}, V_{GS}=0$	
Dynamic							
Input Capacitance	C_{iss}	-	405	-	pF	$V_{DS} = -10\text{V}$ $V_{GS}=0$ $f=1\text{MHz}$	
Output Capacitance	C_{oss}	-	75	-			
Reverse Transfer Capacitance	C_{rss}	-	55	-			
Switching							
Turn-on Delay Time	$T_{d(on)}$	-	20	-	nS	$V_{DD} = -10\text{V}$ $V_{GEN} = -4.5\text{V}$ $R_{GEN}=1\Omega$ $R_L=10\Omega$ $I_D = -1\text{A}$	
Rise Time	T_r	-	60	-			
Turn-off Delay Time	$T_{d(off)}$	-	50	-			
Fall Time	T_f	-	20	-			
Total Gate Charge	-4.5V	Q_g	-	5.5	-	nC	$V_{DS} = -10\text{V}$ $V_{GS} = -2.5\text{V}$ $I_D = -3\text{A}$
	-2.5V		-	3.3	-		
Gate-Source Charge	Q_{gs}	-	0.7	-			
Gate-Drain Charge	Q_{gd}	-	1.3	-			

Notes:

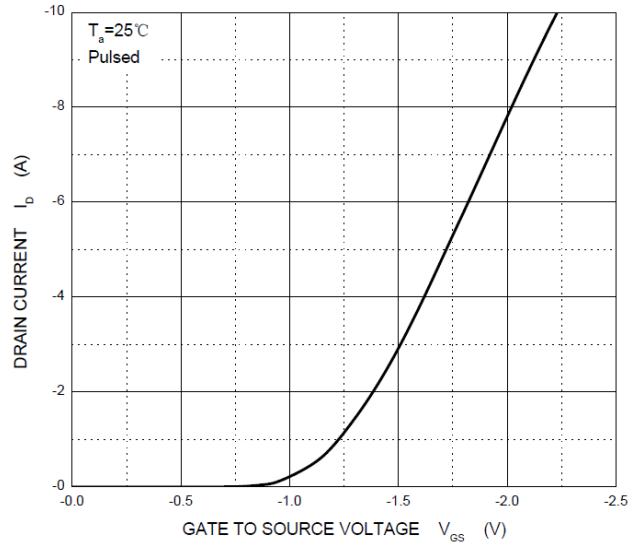
1. Pulse Test : Pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 0.5\%$

CHARACTERISTIC CURVES

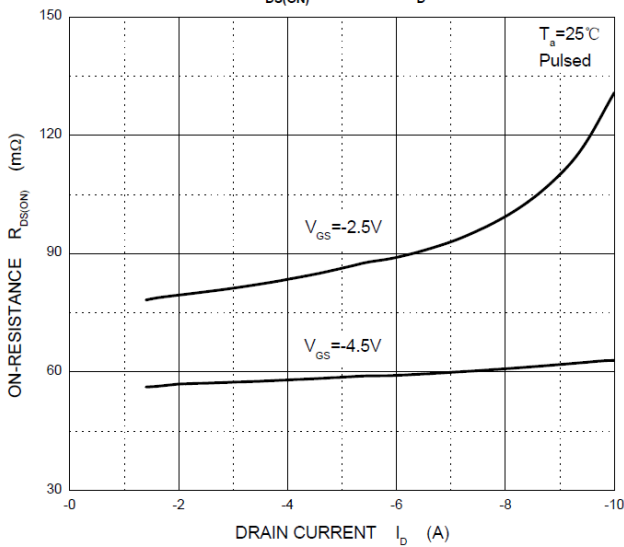
Output Characteristics



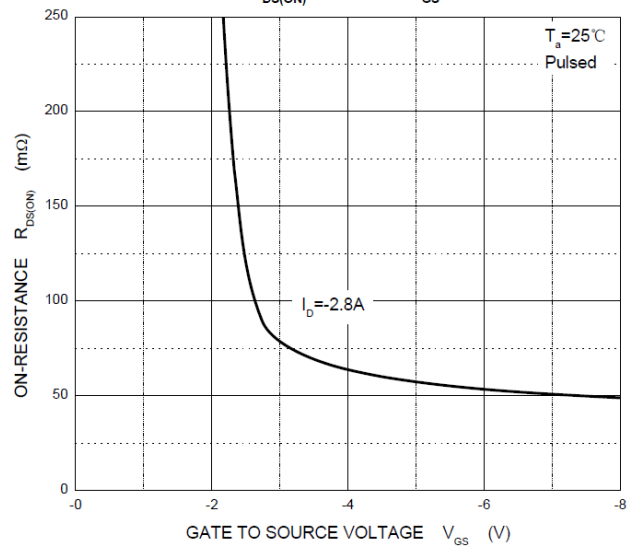
Transfer Characteristics



$R_{DS(ON)}$ — I_b



$R_{DS(ON)}$ — V_{GS}



I_s — V_{SD}

