Elektronische Bauelemente

SST2631-C

-2.5A, -100V, $R_{DS(ON)}$ 220mΩ
P-Channel Enhancement Mode MOSFET

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

FEATURES

- -100V/ -2.5A
  $R_{DS(ON)} \leqq 220m\Omega$ @V_{GS}= -10V
  $R_{DS(ON)} \leqq 240m\Omega$ @V_{GS}= -4.5V
- Reliable and Rugged
- Green Device Available

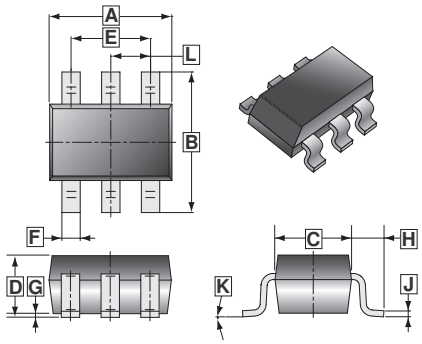
APPLICATION

- Power Management in Notebook Computer
- Portable Equipment and Battery Powered Systems

MARKING

2631
□□□□ = Date Code

SOT-26



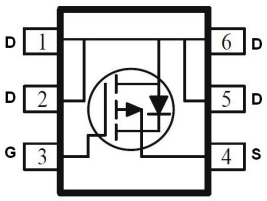
REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.70	3.10	G	0	0.10
B	2.60	3.00	H	0.60 REF.	
C	1.40	1.80	J	0.12 REF.	
D	1.30 MAX.		K	0°	10°
E	1.90 REF.		L	0.95 REF.	
F	0.25	0.50			

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-26	3K	7 inch

ORDER INFORMATION

Part Number	Type
SST2631-C	Lead (Pb)-free and Halogen-free



ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Ratings		Unit
			t≦5sec	Steady State	
Drain-Source Voltage		V_{DS}	-100		V
Gate-Source Voltage		V_{GS}	±20		V
Continuous Drain Current, @V_{GS}= -10V [1]	T_A=25°C	I_D	-2.5	-1.9	A
	T_A=70°C		-2	-1.5	
Pulsed Drain Current [3]		I_{DM}	-10		A
Total Power Dissipation	T_A=25°C	P_D	2		W
Operating Junction and Storage Temperature Range		T_J, T_{STG}	-55~150		°C
Thermal Data					
Thermal Resistance Junction-ambient [1]		$R_{\theta JA}$	t≦5sec, 62.5		°C/W
			Steady State, 110		
Thermal Resistance Junction-ambient [2]			156		
Thermal Resistance Junction-case [1]		$R_{\theta JC}$	39		

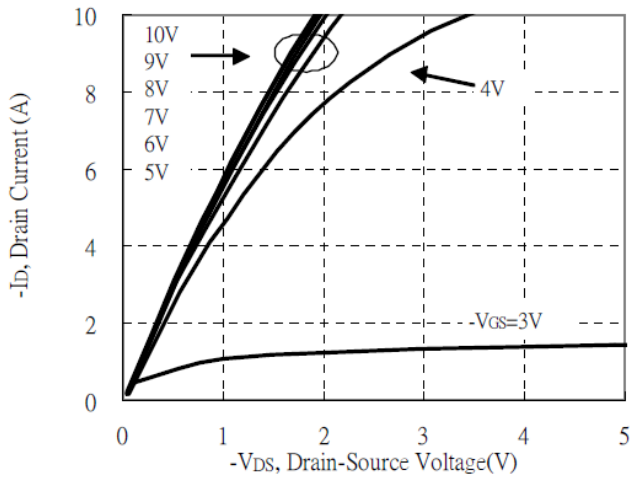
ELECTRICAL CHARACTERISTICS (T_J=25°C unless otherwise specified)

Parameter		Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Drain-Source Breakdown Voltage		BV_{DSS}	-100	-	-	V	V_{GS}=0, I_D= -250μA
Gate Threshold Voltage		$V_{GS(th)}$	-1	-	-2.5	V	V_{DS}=V_{GS}, I_D= -250μA
Forward Transconductance		g_{fs}	-	5	-	S	V_{DS}= -5V, I_D= -1.5A
Gate-Source Leakage Current		I_{GSS}	-	-	±100	nA	V_{GS}= ±20V
Drain-Source Leakage Current	T_J=25°C	I_{DSS}	-	-	-1	μA	V_{DS}= -80V, V_{GS}=0
	T_J=55°C		-	-	-10		
Static Drain-Source On-Resistance [4]		$R_{DS(ON)}$	-	205	220	mΩ	V_{GS}= -10V, I_D= -1.5A
			-	220	240		V_{GS}= -4.5V, I_D= -1A
Total Gate Charge		Q_g	-	20	-	nC	I_D= -1.5A V_{DS}= -80V V_{GS}= -10V
Gate-Source Charge		Q_{gs}	-	4.4	-		
Gate-Drain Change		Q_{gd}	-	4.3	-		
Turn-on Delay Time		$T_{d(on)}$	-	14	-	nS	V_{DS}= -50V I_D= -1A V_{GS}= -10V R_G=6Ω
Rise Time		T_r	-	10	-		
Turn-off Delay Time		$T_{d(off)}$	-	37	-		
Fall Time		T_f	-	10	-		
Input Capacitance		C_{iss}	-	1406	-	pF	V_{GS}=0 V_{DS}= -20V f=1MHz
Output Capacitance		C_{oss}	-	56	-		
Reverse Transfer Capacitance		C_{rss}	-	33	-		
Source-Drain Diode							
Forward on Voltage [4]		V_{SD}	-	-	-1.2	V	I_S= -1.9A, V_{GS}=0
Continuous Source Current [1]		I_S	-	-	-1.9	A	
Pulsed Source Current [3]		I_{SM}	-	-	-10		

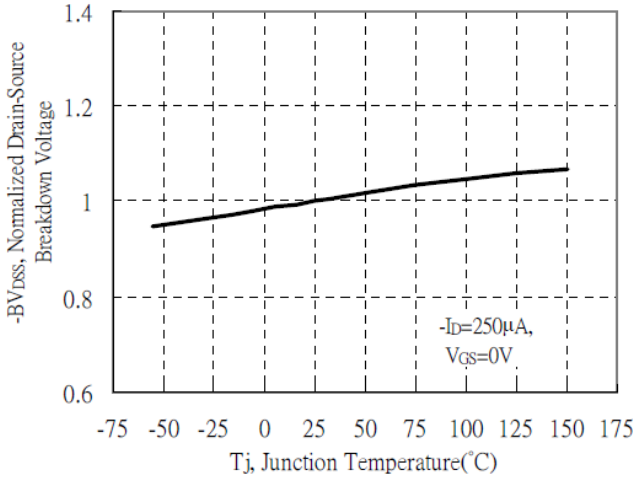
Notes:
1. Surface mounted on a 1 inch^2 FR-4 board with 2OZ copper.
2. When mounted on Min. copper pad.
3. Pulse width limited by maximum junction temperature.
4. The data tested by pulsed, pulse width≦300us, duty cycle≦2%.

CHARACTERISTIC CURVES

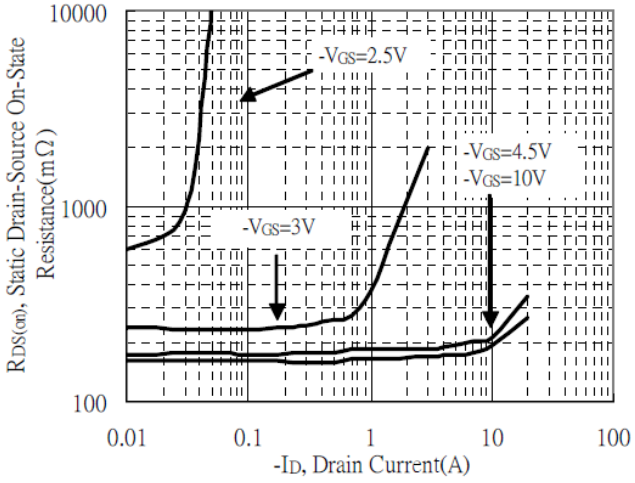
Typical Output Characteristics



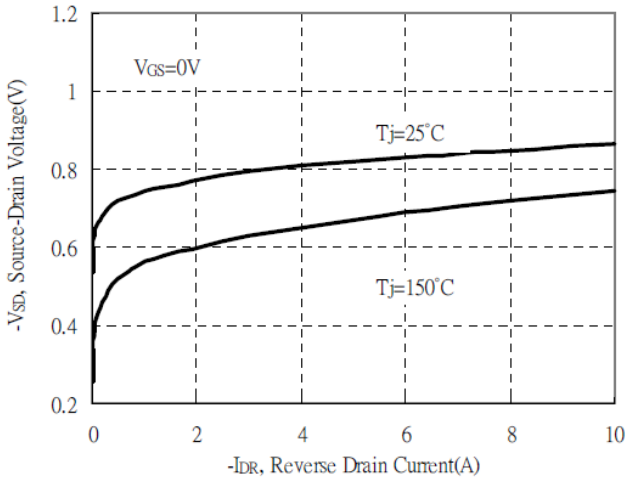
Brekdown Voltage vs Ambient Temperature



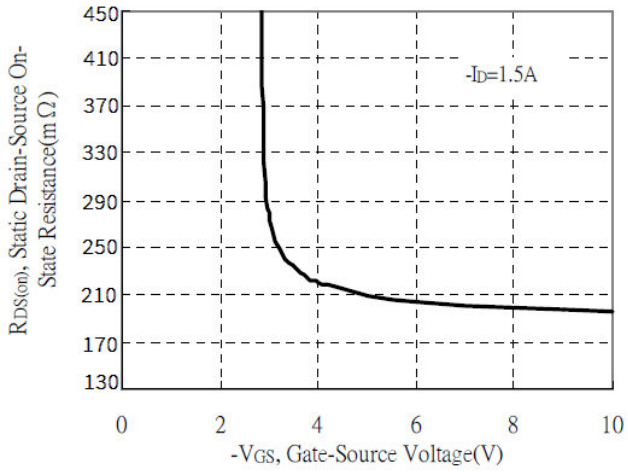
Static Drain-Source On-State resistance vs Drain Current



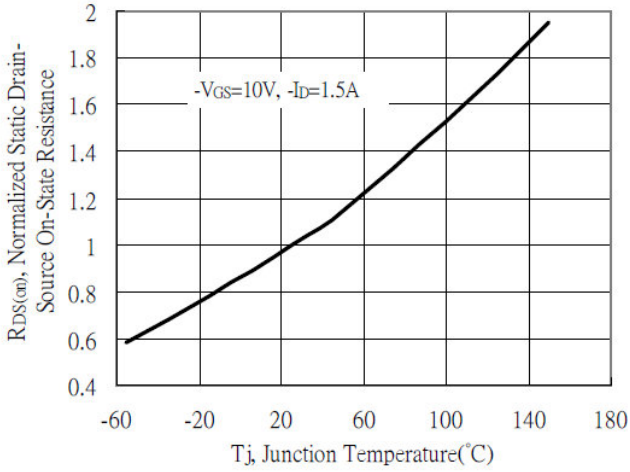
Reverse Drain Current vs Source-Drain Voltage



Static Drain-Source On-State Resistance vs Gate-Source Voltage

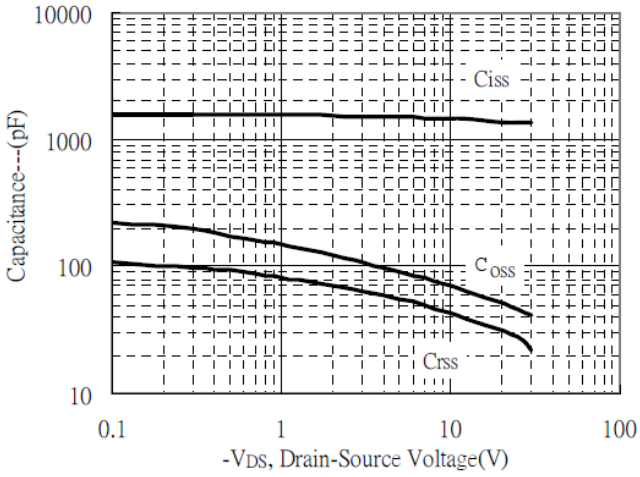


Drain-Source On-State Resistance vs Junction Tempearture

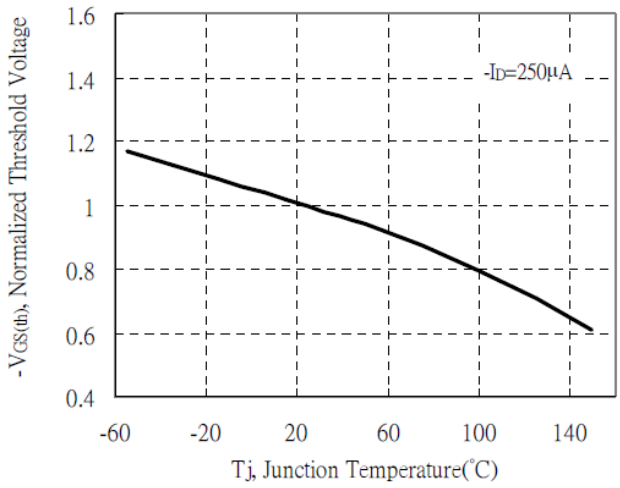


CHARACTERISTIC CURVES

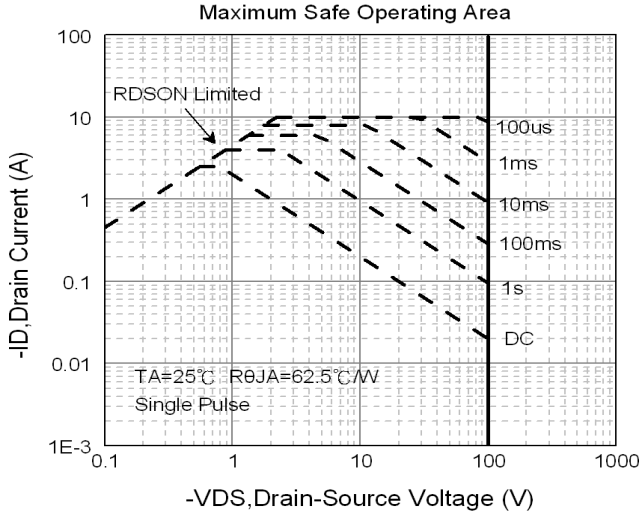
Capacitance vs Drain-to-Source Voltage



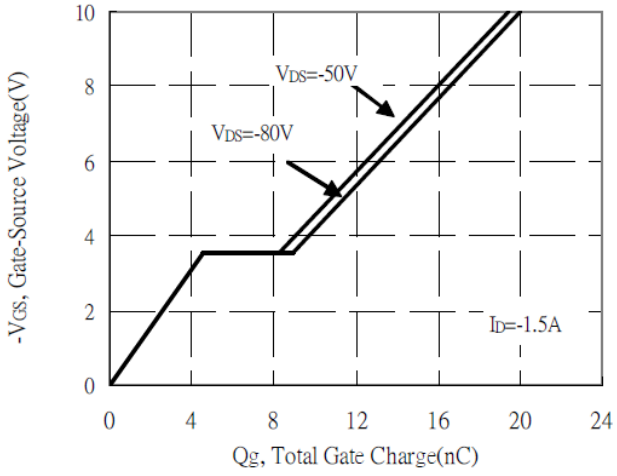
Threshold Voltage vs Junction Tempearture



Maximum Safe Operating Area



Gate Charge Characteristics



Transient Thermal Response Curves