SECOS
Elektronische Bauelemente

SST2630
3.8A, 100V, $R_{DS(ON)}$ 110 mΩ
N-Ch Enhancement Mode Power MOSFET

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

DESCRIPTION

SST2630 provides designers with the best combination of fast switching, low on-resistance and cost-effectiveness.
SOT-26 package is universally used for all commercial-industrial surface mount applications.

FEATURES

- Low on-resistance
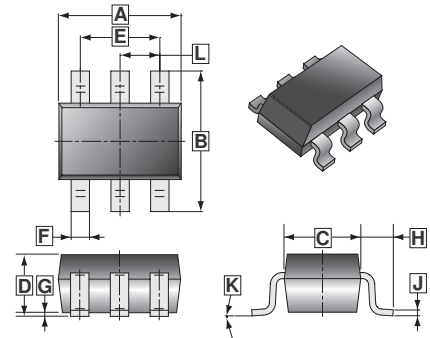- Capable of 2.5V gate drive
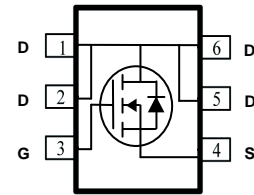- Low drive current

MARKING

2630
▢▢▢▢ ◄ ▢ = Date Code
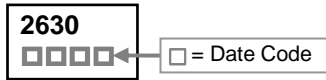
PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-26	3K	7 inch

SOT-26

REF.	Millimeter Min.	Millimeter Max.	REF.	Millimeter Min.	Millimeter 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			

ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	100	V
Gate-Source Voltage		V_{GS}	±20	V
Continuous Drain Current, V_{GS}=10V [1]	T_A=25℃	I_D	3.8	A
	T_A=70℃		3	
Pulsed Drain Current [3]		I_{DM}	14	A
Power Dissipation	T_A=25℃	P_D	2	W
Linear Derating Factor			0.016	W / ℃
Operating Junction and Storage Temperature Range		T_J, T_{STG}	-55~150	℃
Thermal Resistance Rating				
Maximum Thermal Resistance from Junction to Ambient [1]		$R_{θJA}$	62.5	℃ / W

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ELECTRICAL CHARACTERISTICS (T$_J$=25℃ unless otherwise specified)

Parameter		Symbol	Min.	Typ.	Max.	Unit	Test Condition
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
Gate-Body 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$_J$=70°C		-	-	25		V$_{DS}$=80V, V$_{GS}$=0
Drain-Source On-Resistance		R$_{DS(ON)}$	-	-	110	mΩ	V$_{GS}$=10V, I$_D$=3.8A
					120		V$_{GS}$=4.5V, I$_D$=2.5A
Total Gate Charge [2]		Q$_g$	-	25	-	nC	V$_{DS}$=80V V$_{GS}$=10V I$_D$=3A
Gate-Source Charge		Q$_{gs}$	-	3.7	-		
Gate-Drain ("Miller")Charge		Q$_{gd}$	-	4.6	-		
Turn-on Delay Time [2]		T$_{d(on)}$	-	4.2	-	nS	V$_{DS}$=50V V$_{GS}$=10V R$_G$=3.3Ω I$_D$=3A
Rise Time		T$_r$	-	8.2	-		
Turn-off Delay Time		T$_{d(off)}$	-	35.6	-		
Fall Time		T$_f$	-	9.6	-		
Input Capacitance		C$_{iss}$	-	1548	-	pF	V$_{GS}$=0V V$_{DS}$=15V f=1MHz
Output Capacitance		C$_{oss}$	-	60	-		
Reverse Transfer Capacitance		C$_{rss}$	-	36	-		
Source-Drain Diode							
Diode Forward Voltage [2]		V$_{SD}$	-	-	1.2	V	I$_S$=3.8A, V$_{GS}$=0

Notes:
1. Surface mounted on a 1 inch[2] copper pad of FR4 board. The temperature is 156℃/ W when the device is mounted on a minimum copper pad.
2. Pulse width≦300µs, duty cycle≦2%
3. Pulse width is limited by the maximum junction temperature.
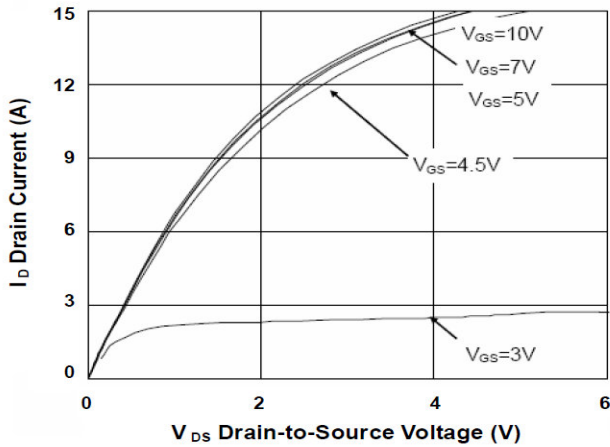
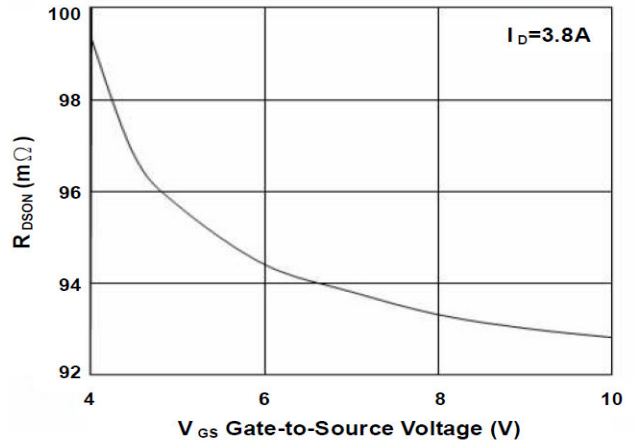# CHARACTERISTICS CURVE

Fig.1 Typical Output Characteristics
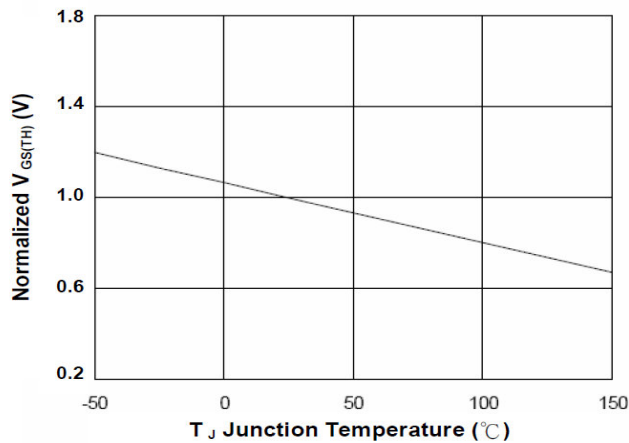

Fig.2 On-Resistance vs. G-S Voltage
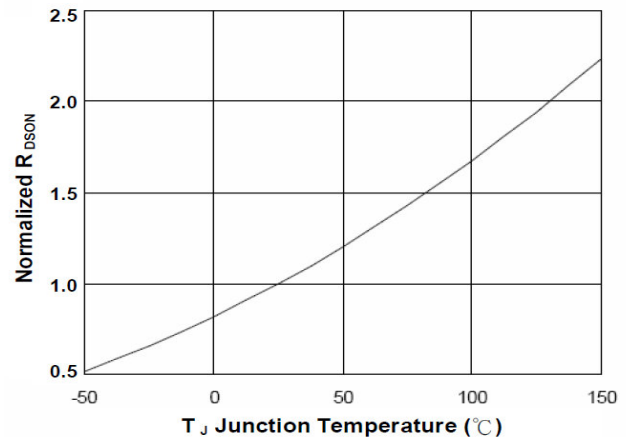

Fig.3 Normalized V$_{GS(th)}$ vs. T$_J$
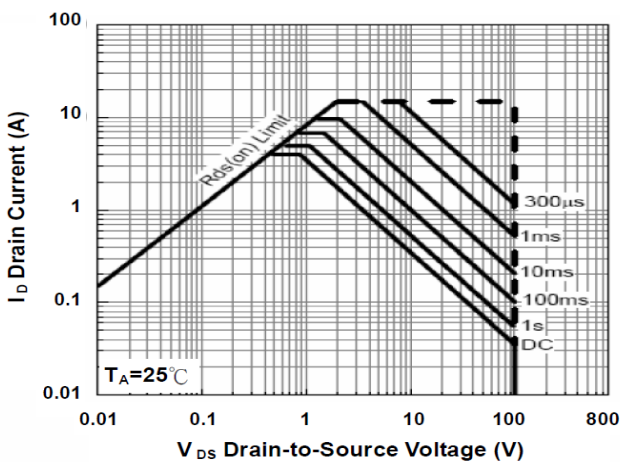

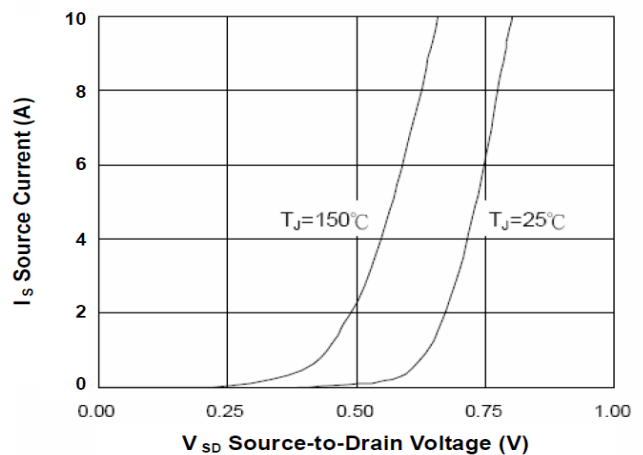**Fig.4 Normalized R$_{DSON}$ vs. T$_J$**
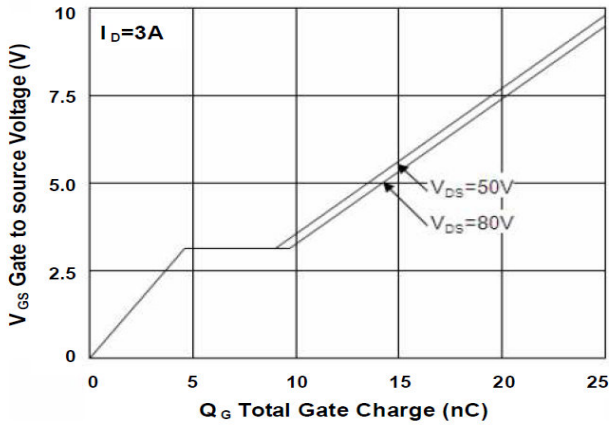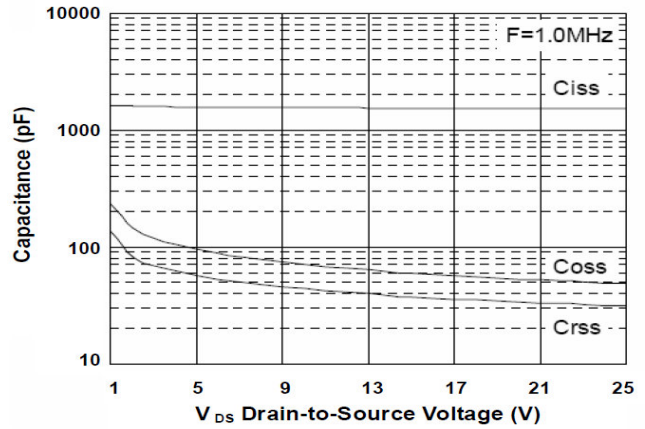

Fig.5 Safe Operating Area

Fig.6 Forward Characteristics of Reverse

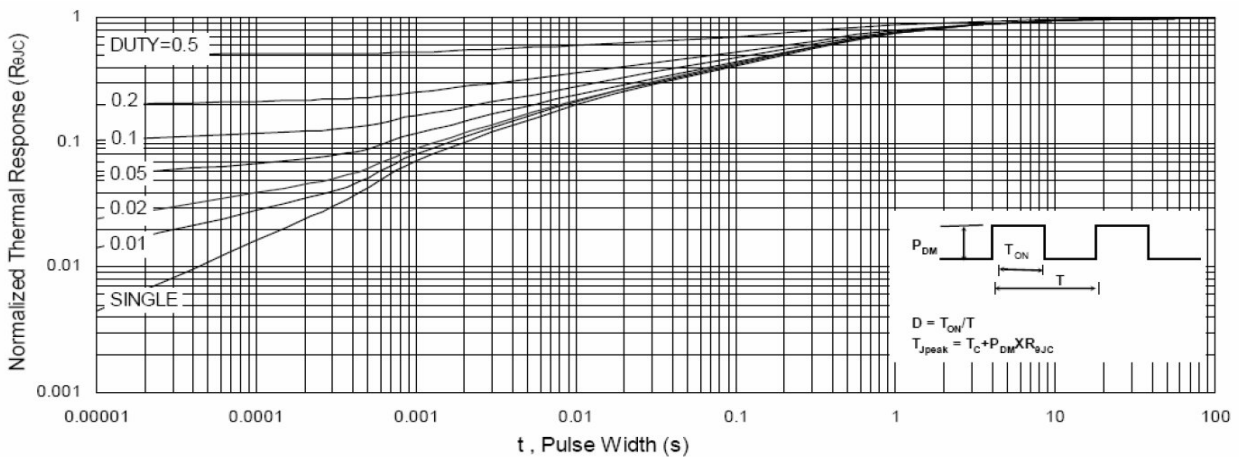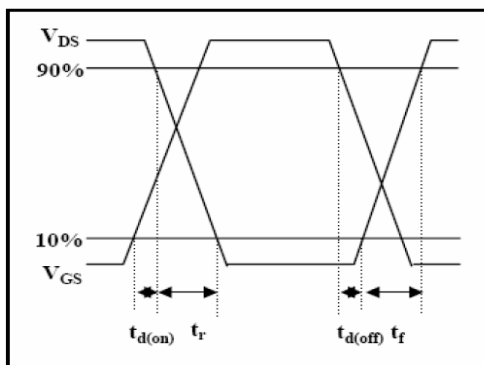## CHARACTERISTICS CURVE
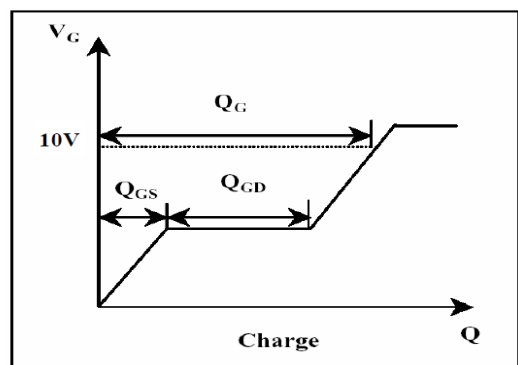

Fig.7 Gate Charge Characteristics

Fig.8 Capacitance Characteristic

Fig.9 Normalized Maximum Transient Thermal Impedance

Fig.10 Switching Time Waveform

Fig.11 Gate Charge Waveform