Elektronische Bauelemente

SST6318-C

0.35A, 60V, $R_{DS(ON)}$ 1.6Ω

Dual N-Ch Enhancement Mode Power MOSFET

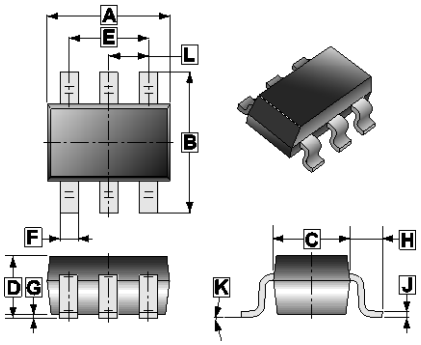
RoHS Compliant Product
A suffix of "-C" specifies halogen and lead-free

DESCRIPTION

The SST6318-C is the highest performance trench Dual N-Ch MOSFETs with extreme high cell density, which provide excellent $R_{DS(ON)}$ and gate charge for most of the synchronous buck converter applications.

The SST6318-C meet the RoHS and Green Product requirement with full function reliability approved.

SOT-26

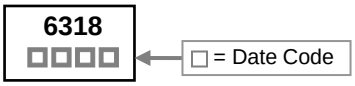


REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.70	3.10	G	0	0.10
B	2.60	3.00	H	0.60 REF.	
C	1.40	1.80	J	0.12 REF.	
D	1.30 MAX.		K	0°	10°
E	1.90 REF.		L	0.95 REF.	
F	0.25	0.50			

FEATURES

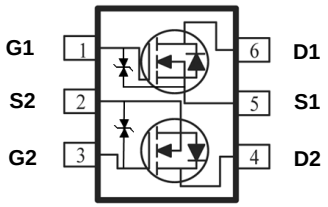
- Advanced High Cell Density Trench Technology
- Super Low Gate Charge
- Green Device Available

MARKING



PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-26	3K	7 inch



ORDER INFORMATION

Part Number	Type
SST6318-C	Lead (Pb)-free and Halogen-free

ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Ratings	Unit
Drain-Source Voltage		V_{DS}	60	V
Gate-Source Voltage		V_{GS}	±20	V
Continuous Drain Current [1], @V_{GS}=10V	T_A=25°C	I_D	0.35	A
	T_A=70°C		0.28	
Pulsed Drain Current [3]		I_{DM}	1	A
Total Power Dissipation	T_A=25°C	P_D	0.6	W
Operating Junction and Storage Temperature Range		T_J, T_{STG}	-55~150	°C
Thermal Data				
Thermal Resistance from Junction-Ambient [1]		$R_{\theta JA}$	208	°C/W
Thermal Resistance from Junction-Ambient [2]			357	
Thermal Resistance from Junction-Case [1]		$R_{\theta JC}$	156	

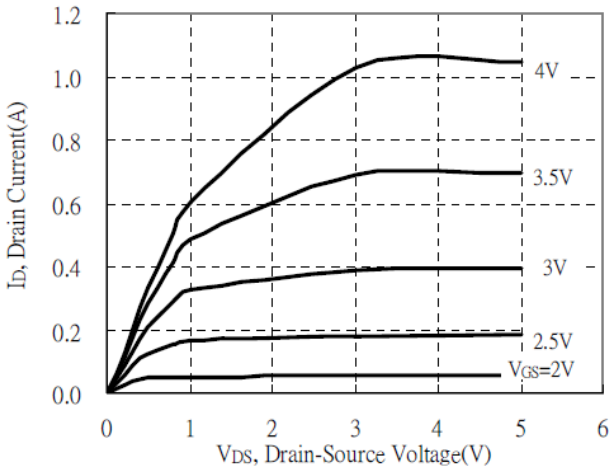
ELECTRICAL CHARACTERISTICS (T_J=25°C unless otherwise specified)

Parameter		Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Drain-Source Breakdown Voltage		BV_{DSS}	60	-	-	V	V_{GS}=0, I_D=250μA
Gate Threshold Voltage		$V_{GS(th)}$	0.5	-	1.5	V	V_{DS}=V_{GS}, I_D=250μA
Forward Transconductance		g_{fs}	-	0.36	-	S	V_{DS}=10V, I_D=220mA
Gate-Source Leakage Current		I_{GSS}	-	-	±10	μA	V_{GS}= ±16V
Drain-Source Leakage Current	T_J=25°C	I_{DSS}	-	-	1	μA	V_{DS}=48V, V_{GS}=0
	T_J=55°C		-	-	5		V_{DS}=48V, V_{GS}=0
Static Drain-Source On-Resistance [4]		$R_{DS(ON)}$	-	-	1.6	Ω	V_{GS}=10V, I_D=220mA
			-	-	2		V_{GS}=4.5V, I_D=220mA
			-	-	4.5		V_{GS}=2.5V, I_D=120mA
Forward on Voltage [4]		V_{SD}	-	-	1.2	V	V_{GS}=0, I_S=350mA, T_J=25°C
Total Gate Charge		Q_g	-	1.39	-	nC	I_D=0.3A V_{DS}=25V V_{GS}=10V
Gate-Source Charge		Q_{gs}	-	0.31	-		
Gate-Drain Charge		Q_{gd}	-	0.17	-		
Turn-on Delay Time		$T_{d(on)}$	-	3.2	-	nS	V_{DD}=30V I_D=0.29A V_{GS}=10V R_G=6Ω
Rise Time		T_r	-	2.6	-		
Turn-off Delay Time		$T_{d(off)}$	-	17	-		
Fall Time		T_f	-	39.5	-		
Input Capacitance		C_{iss}	-	27	-	pF	V_{GS}=0 V_{DS}=25V f=1MHz
Output Capacitance		C_{oss}	-	13	-		
Reverse Transfer Capacitance		C_{rss}	-	6	-		

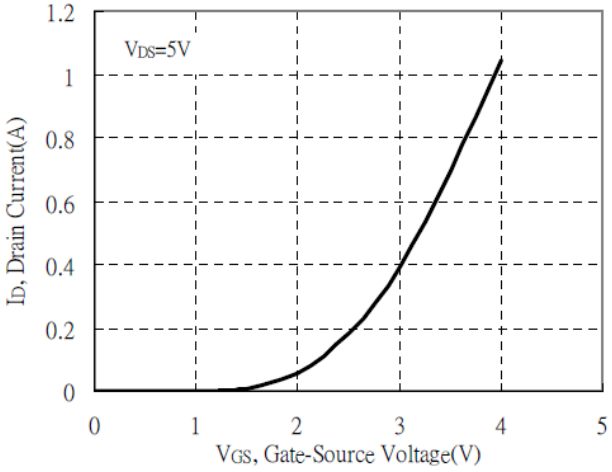
Notes:
1. Surface mounted on a 1 inch^2 FR-4 board with 2OZ copper.
2. Surface mounted on FR4 Board using the minimum recommended pad size.
3. Pulse width limited by maximum junction temperature, Pulse Width≦300μs, Duty Cycle≦2%.
4. The data tested by pulsed, pulse width≦300μs, duty cycle≦2%.

CHARACTERISTIC CURVES

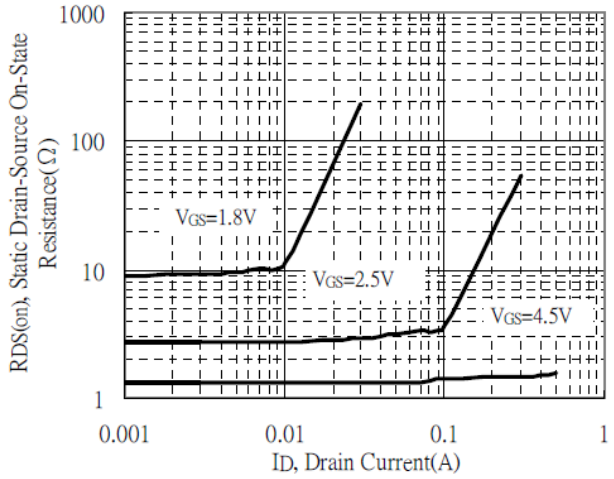
Typical Output Characteristics



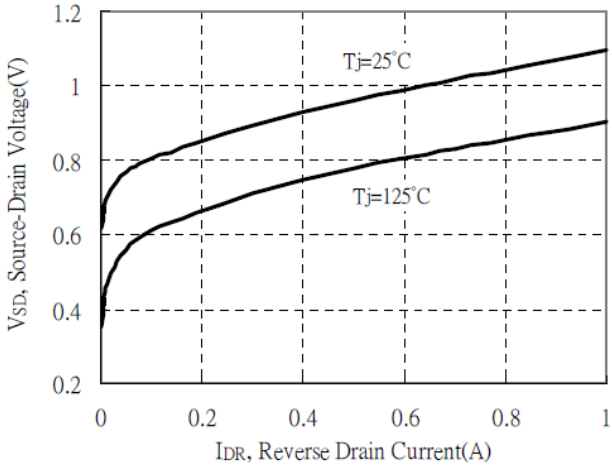
Typical Transfer Characteristics



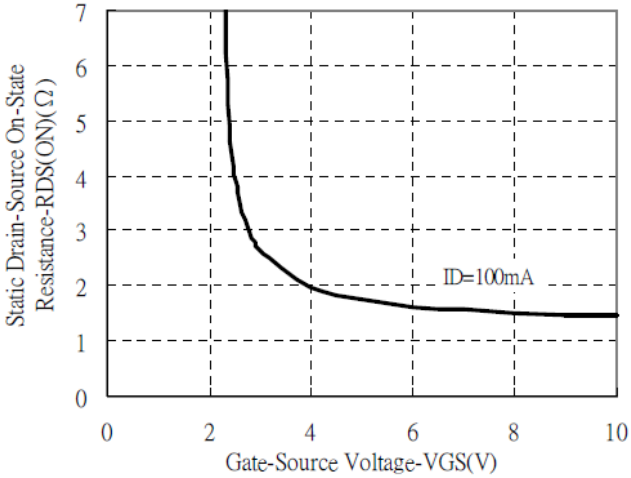
Static Drain-Source On-State resistance vs Drain Current



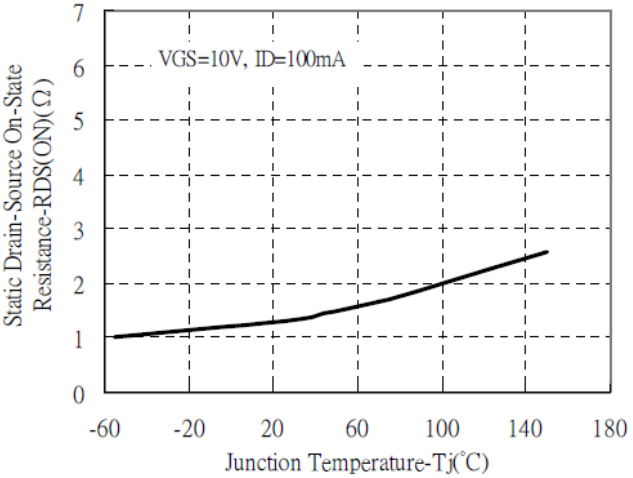
Reverse Drain Current vs Source-Drain Voltage



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

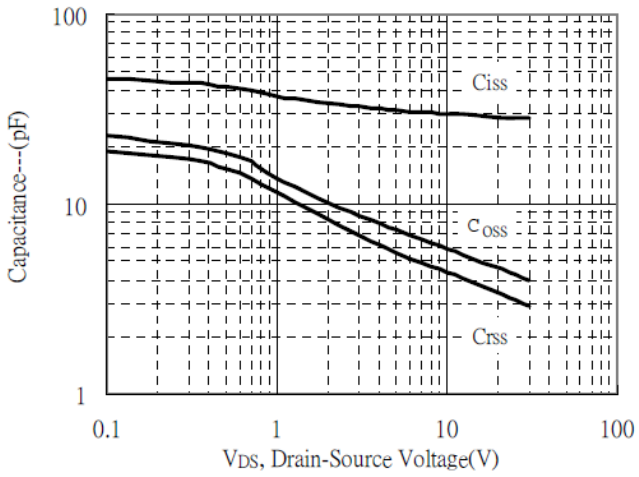


Drain-Source On-State Resistance vs Junction Tempearture

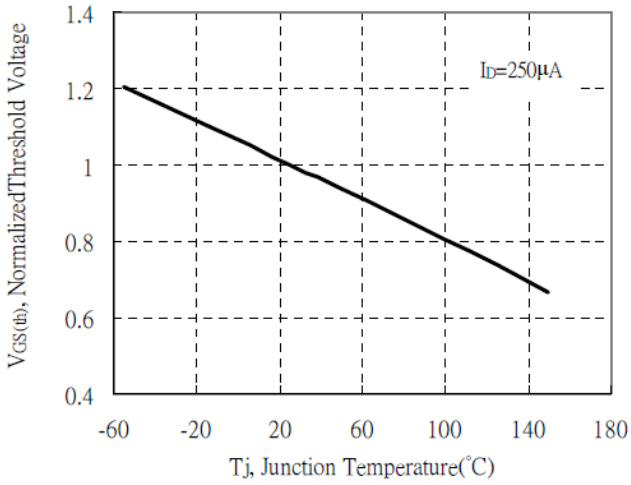


CHARACTERISTIC CURVES

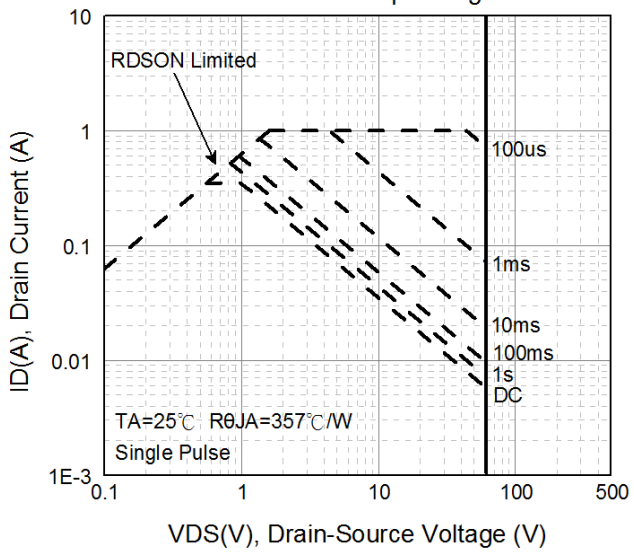
Capacitance vs Drain-to-Source Voltage



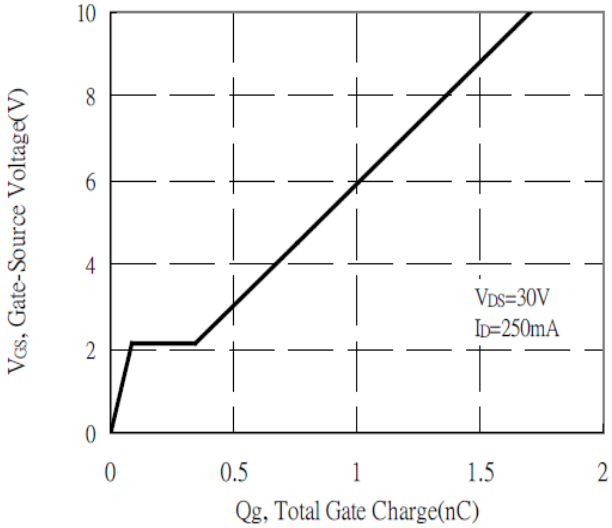
Threshold Voltage vs Junction Tempearture



Maximum Safe Operating Area



Gate Charge Characteristics



Transient Thermal Response Curves