Elektronische Bauelemente

SST2622

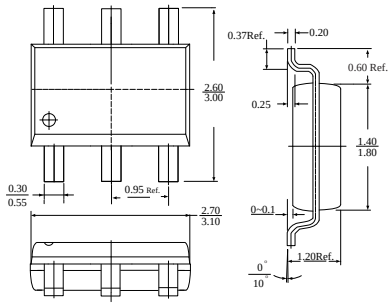
520mA, 50V, $R_{DS(ON)}$ 1.8Ω

N-Channel Enhancement Mode Power Mos.FET

SOT-26

Description

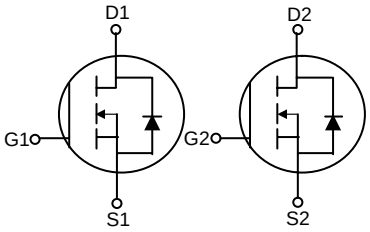
The SST2622 utiltzed advance processing techniques to achieve the lowest possible on-resistance, extermely efficient and cost-effectiveness device. The SOT-26 is universally used for all commercial-industrial applications.

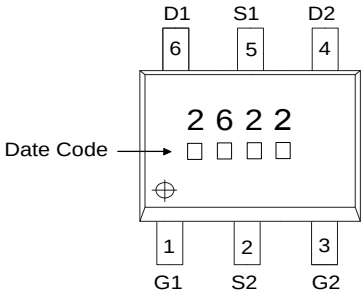


Dimensions in millimeters

Features

* RoHS Compliant
* Low Gate Charge
* Surface Mount Package





Absolute Maximum Ratings

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	V_{DS}	50	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current[3],V_{GS}@10V	I_D@T_A=25°C	520	mA
Continuous Drain Current[3],V_{GS}@10V	I_D@T_A=70°C	410	mA
Pulsed Drain Current[1]	I_{DM}	1.5	A
Total Power Dissipation	P_D@T_A=25°C	0.8	W
Linear Derating Factor		0.006	W/°C
Operating Junction and Storage Temperature Range	Tj, Tstg	-55~+150	°C

Thermal Data

Parameter	Symbol	Ratings	Unit
Thermal Resistance Junction-ambient[3] (Max)	Rthj-a	150	°C/W

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Electrical Characteristics(Tj=25°C Unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Drain-Source Breakdown Voltage	BV_{DSS}	50	–	–	V	V_{GS}=0V, I_D= 250uA
Breakdown Voltage Temp. Coefficient	$\triangle BV_{DS}/\triangle Tj$	–	0.06	–	V/ °C	Reference to 25°C, I_D= 1mA
Gate Threshold Voltage	$V_{GS(th)}$	1.0	–	3.0	V	V_{DS}=V_{GS}, I_D=250uA
Gate-Source Leakage Current	I_{GSS}	–	–	±30	uA	V_{GS}=±20V
Drain-Source Leakage Current (Tj=25°C)	I_{DSS}	–	–	10	uA	V_{DS}=50V, V_{GS}=0
Drain-Source Leakage Current (Tj=70°C)		–	–	100	uA	V_{DS}= 40V, V_{GS}=0
Static Drain-Source On-Resistance[2]	$R_{DS(ON)}$	–	–	1.8	Ω	V_{GS}=10V, I_D=500mA
		–	–	3.2		V_{GS}=4.5V, I_D=200mA
Total Gate Charge[2]	Qg	–	1	1.6	nC	I_D=500mA V_{DS}=40V V_{GS}=4.5V
Gate-Source Charge	Qgs	–	0.5	–		
Gate-Drain ("Miller") Charge	Qgd	–	0.5	–		
Turn-on Delay Time[2]	$Td_{(ON)}$	–	12	–	nS	V_{DD}= 25V I_D= 500mA V_{GS}=10V R_G=3.3Ω R_D=50Ω
Rise Time	Tr	–	10	–		
Turn-off Delay Time	$Td_{(Off)}$	–	56	–		
Fall Time	T_f	–	29	–		
Input Capacitance	Ciss	–	32	50	pF	V_{GS}=0V V_{DS}=25V f=1.0MHz
Output Capacitance	Coss	–	8	–		
Reverse Transfer Capacitance	Crss	–	6	–		
Forward Transconductance	Gfs	–	600	–	mS	V_{DS}=10V, I_D=500mA

Source-Drain Diode

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Forward On Voltage[2]	V_{SD}	–	–	1.3	V	I_S=600mA, V_{GS}=0V.

Notes: 1.Pulse width limited by Max. junction temperature.

2.Pulse width≦300us, dutycycle≦2%.

3.Surface mounted on 1 in^{2}copper pad of FR4 board; 250°C/W when mounted on min. copper pad.

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Characteristics Curve

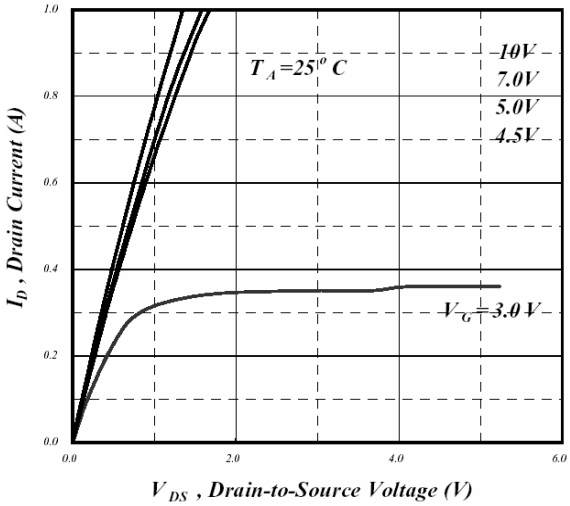

Fig 1. Typical Output Characteristics

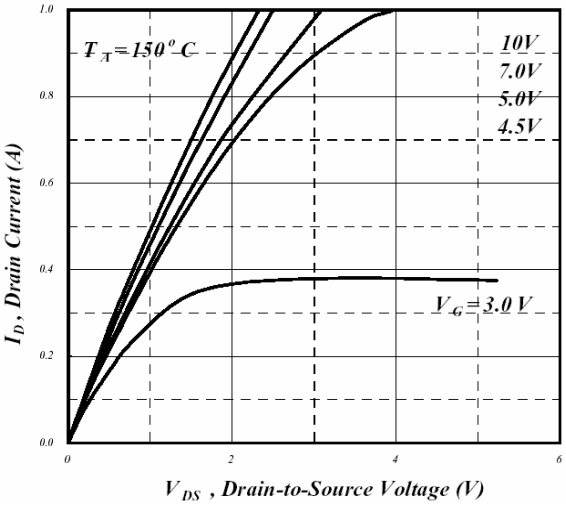

Fig 2. Typical Output Characteristics

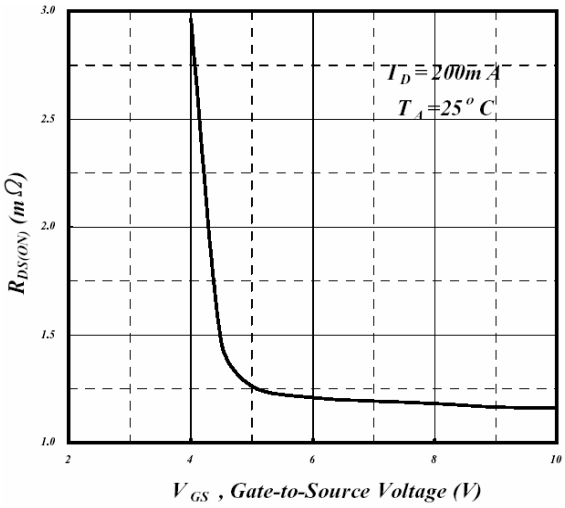

Fig 3. On-Resistance v.s. Gate Voltage

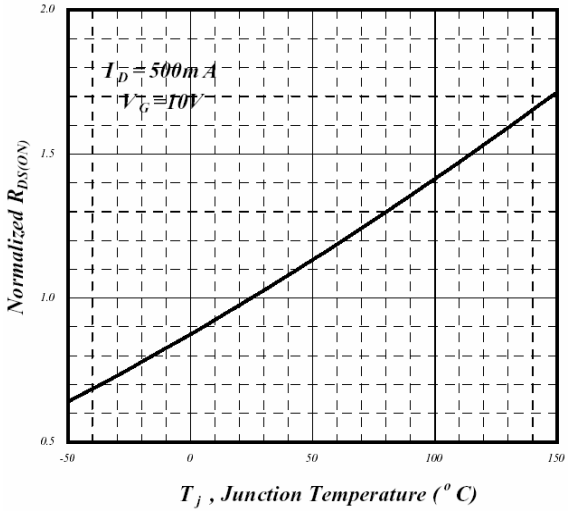

Fig 4. Normalized On-Resistance v.s. Junction Temperature

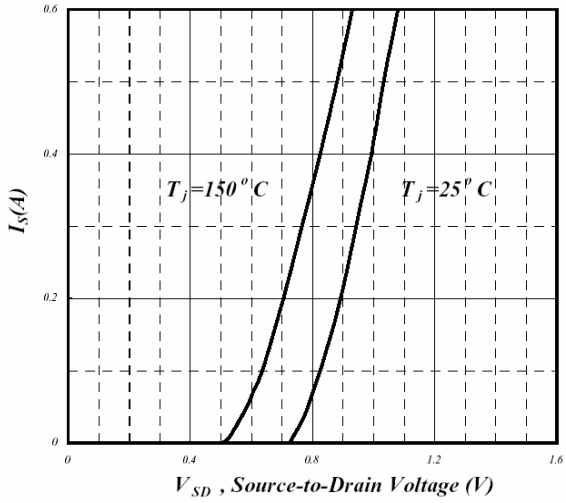

Fig 5. Forward Characteristics of Reverse Diode

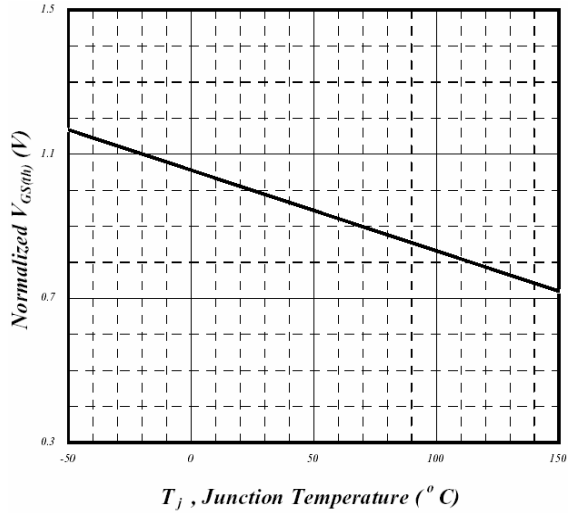

Fig 6. Gate Threshold Voltage v.s. Junction Temperature

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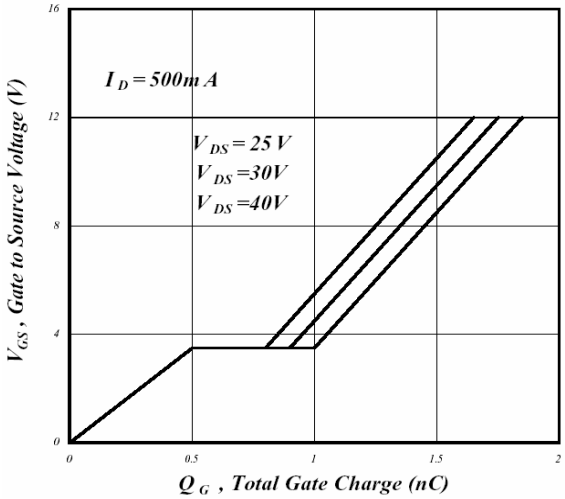

Fig 7. Gate Charge Characteristics

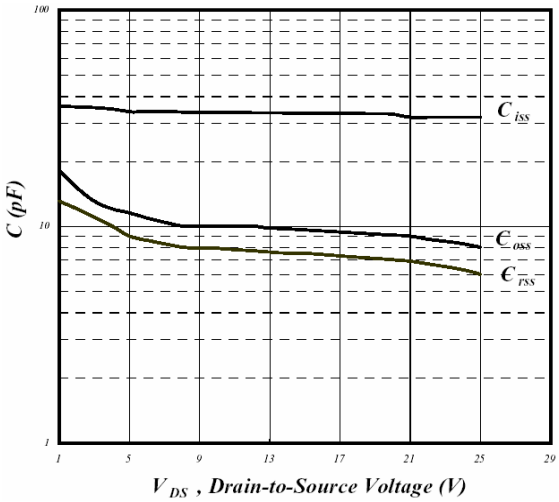

Fig 8. Typical Capacitance Characteristics

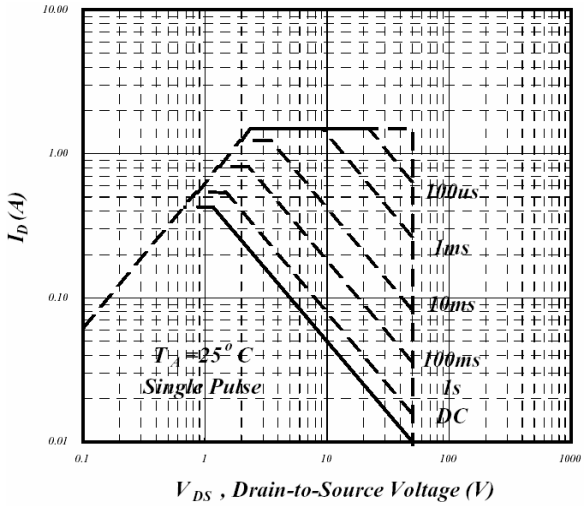

Fig 9. Maximum Safe Operating Area

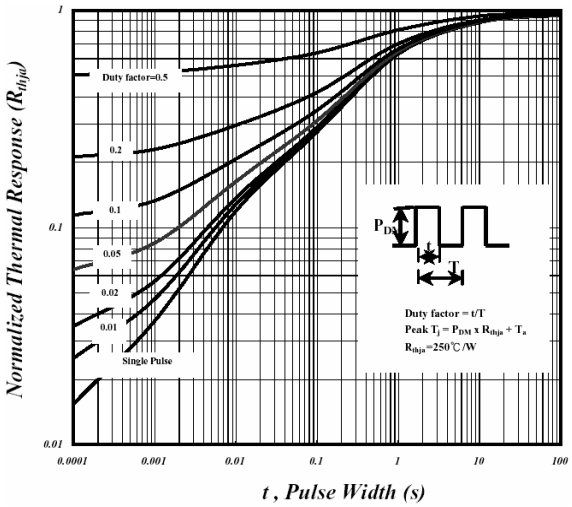

Fig 10. Effective Transient Thermal Impedance

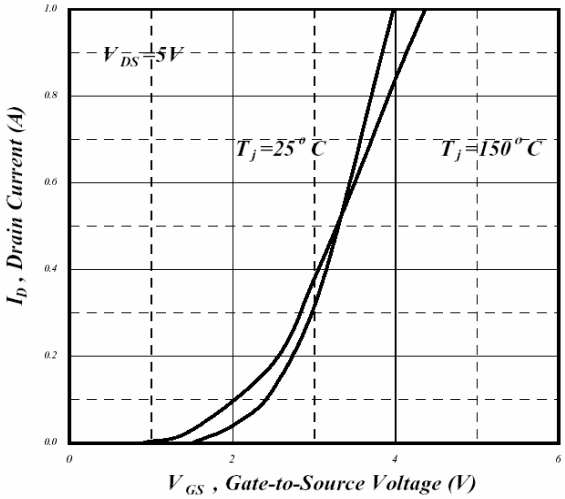

Fig 11. Transfer Characteristics

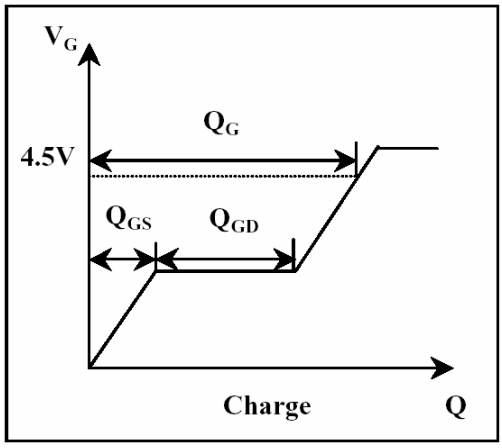

Fig 12. Gate Charge Waveform