Ordering number:ENN5531B

N-Channel Silicon MOSFET

2SK2632LS

Ultrahigh-Speed Switching Applications

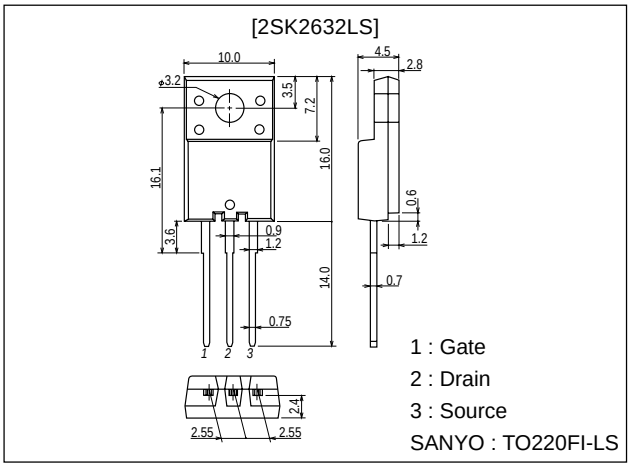
Features

· Low ON-resistance.
· Low Qg.

Package Dimensions

unit:mm

2078B



Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		800	V
Gate-to-Source Voltage	V_{GSS}		±30	V
Drain Current (DC)	I_D		2.5	A
Drain Current (Pulse)	I_{DP}		7.5	A
Allowable Power Dissipation	P_D	PW≤10μs, duty cycle≤1%	2.0	W
		Tc=25˚C	25	W
Channel Temperature	Tch		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

Electrical Characteristics at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	I_D=1mA, V_{GS}=0	800			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=800V, V_{GS}=0			1.0	mA
Gate-to-Source Leakage Current	I_{GSS}	V_{GS}=±30V, V_{DS}=0			±100	nA
Cutoff Voltage	V_{GS}(off)	V_{DS}=10V, I_D=1mA	3.5		5.5	V
Forward Transfer Admittance	| yfs |	V_{DS}=10V, I_D=1.3A	0.7	1.4		S
Static Drain-to-Source On-State Resistance	R_{DS}(on)	V_{GS}=15V, I_D=1.3A		3.6	4.8	Ω
Input Capacitance	Ciss	V_{DS}=20V, f=1MHz		550		pF
Output Capacitance	Coss	V_{DS}=20V, f=1MHz		150		pF
Reverse Transfer Capacitance	Crss	V_{DS}=20V, f=1MHz		70		pF

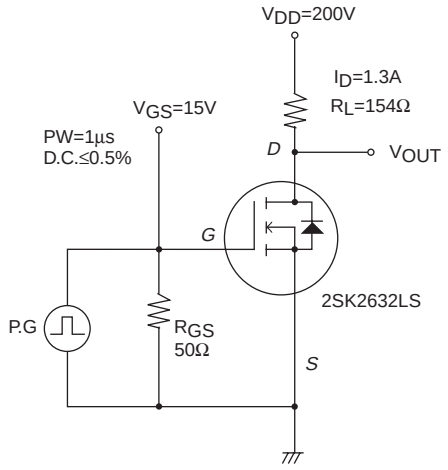
Continued on next page.

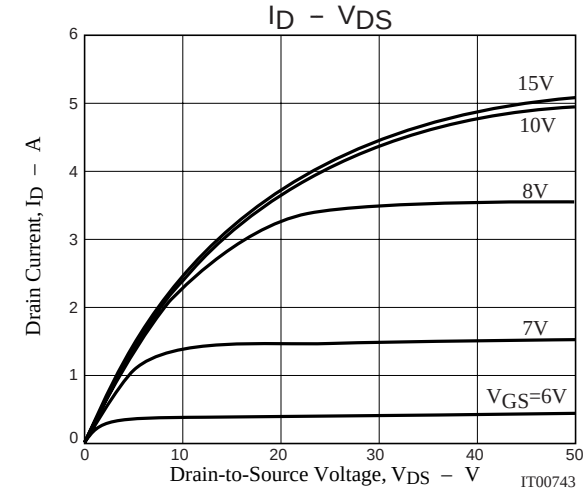
Continued from preceding page.

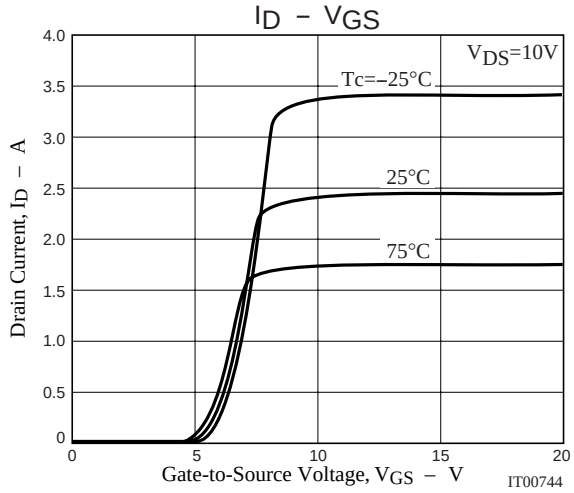
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Total Gate Charge	Qg	V_{DS}=200V, V_{GS}=10V, I_D=2.5A		15		nC
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		15		ns
Rise Time	t_r	See specified Test Circuit		15		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		45		ns
Fall Time	t_f	See specified Test Circuit		23		ns
Diode Forward Voltage	V_{SD}	I_S=2.5A, V_{GS}=0		0.84	1.2	V

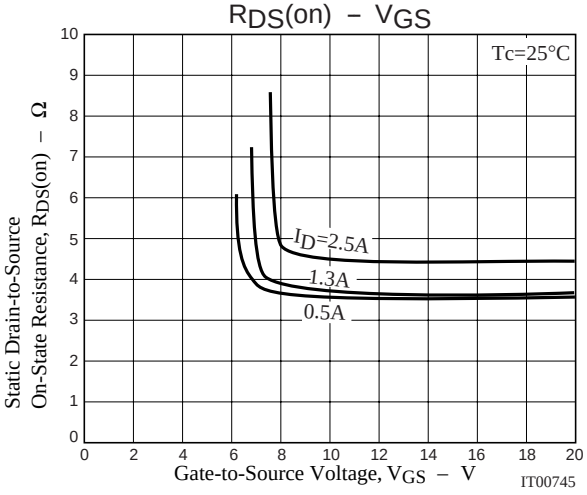
Marking : K2632

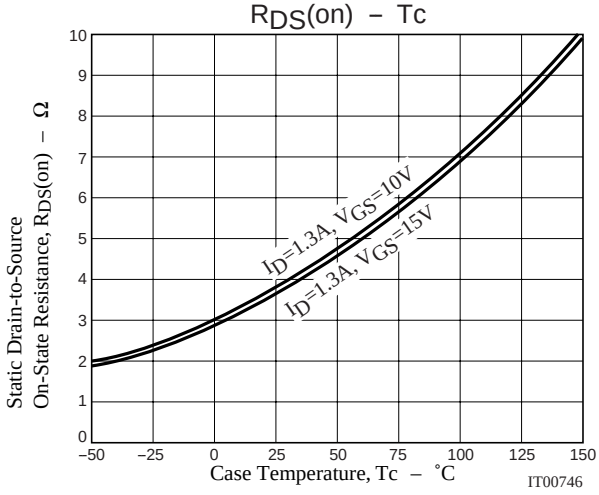
Switching Time Test Circuit

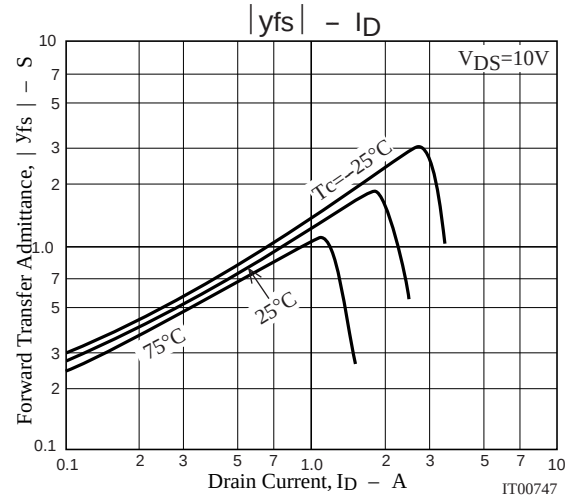


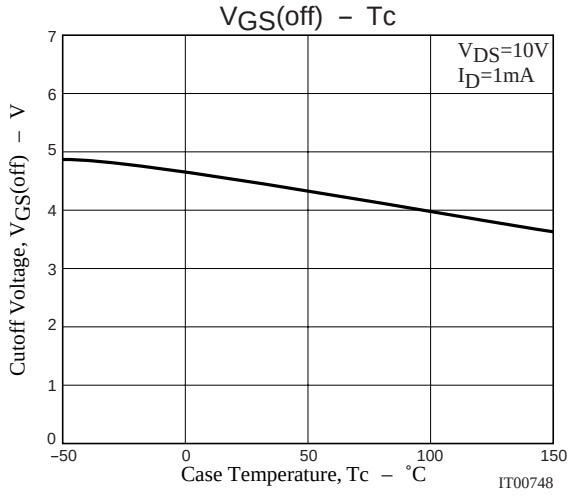


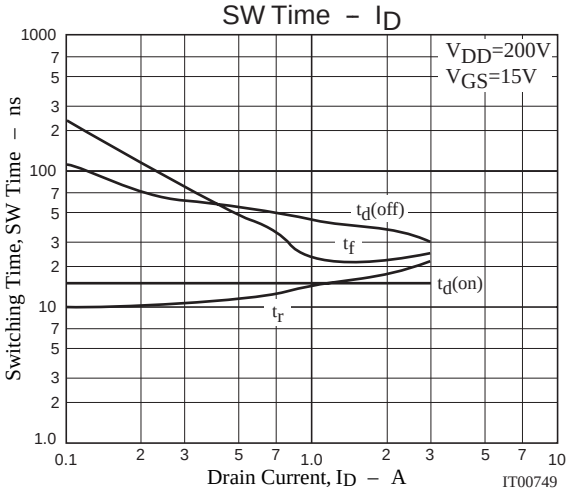


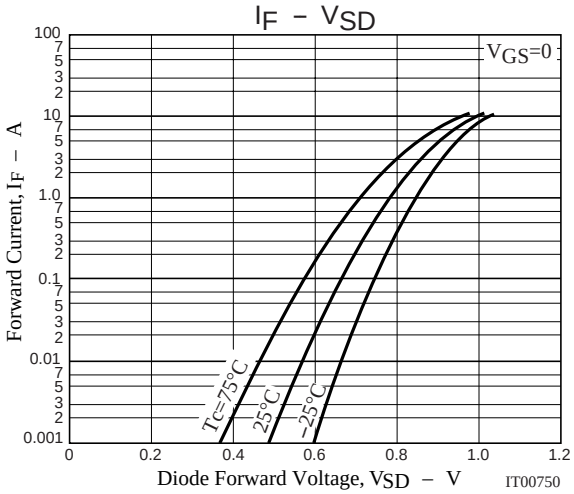


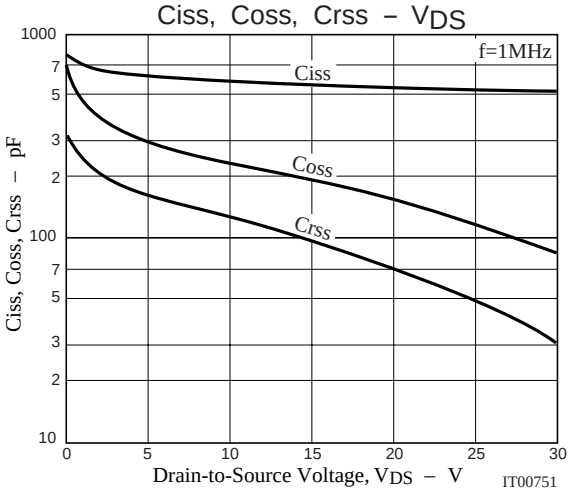


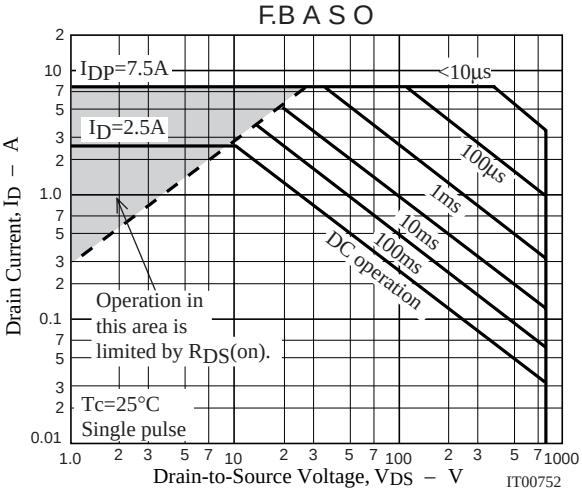

|yfs| – ID
VDS=10V
Tc=–25°C
25°C
75°C
Forward Transfer Admittance, | yfs | – S
Drain Current, ID – A
IT00747

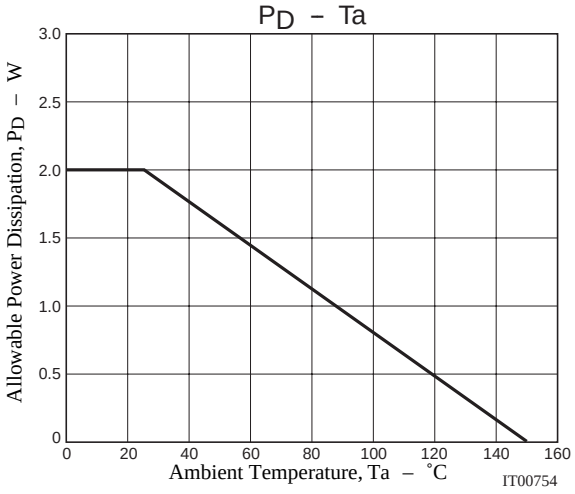

VGS(off) – Tc
VDS=10V
ID=1mA
Cutoff Voltage, VGS(off) – V
Case Temperature, Tc – ˚C
IT00748

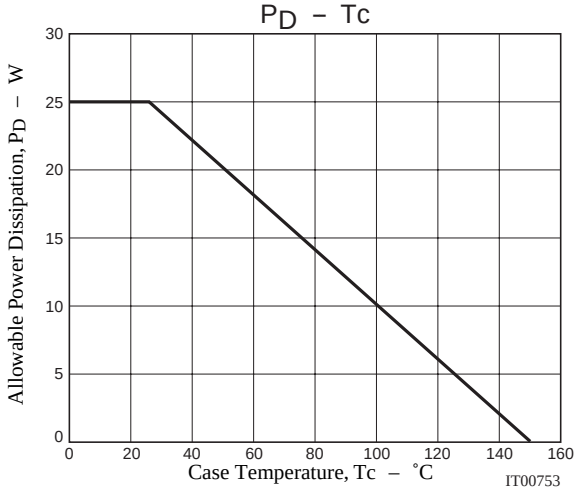

SW Time – ID
VDD=200V
VGS=15V
td(off)
tf
td(on)
tr
Switching Time, SW Time – ns
Drain Current, ID – A
IT00749


IF – VSD
VGS=0
Tc=75°C
25°C
–25°C
Forward Current, IF – A
Diode Forward Voltage, VSD – V
IT00750


Ciss, Coss, Crss – VDS
f=1MHz
Ciss
Coss
Crss
Ciss, Coss, Crss – pF
Drain-to-Source Voltage, VDS – V
IT00751


F.B A S O
IDP=7.5A
ID=2.5A
<10µs
100µs
1ms
10ms
100ms
DC operation
Operation in
this area is
limited by RDS(on).
Tc=25°C
Single pulse
Drain Current, ID – A
Drain-to-Source Voltage, VDS – V
IT00752


PD – Ta
Allowable Power Dissipation, PD – W
Ambient Temperature, Ta – ˚C
IT00754


PD – Tc
Allowable Power Dissipation, PD – W
Case Temperature, Tc – ˚C
IT00753