



2SK2631

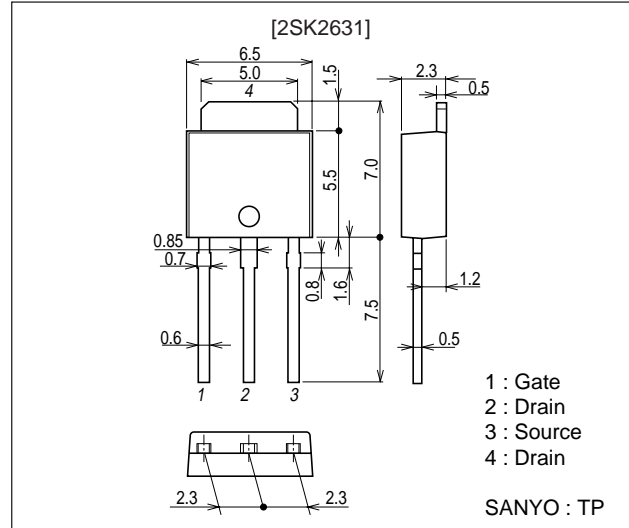
Ultrahigh-Speed Switching Applications

Features

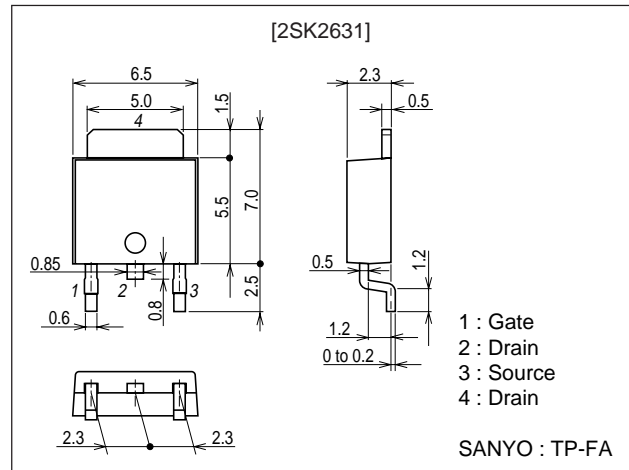
- Low ON resistance.
- Smaller amount of total gate charge.

Package Dimensions

unit : mm
2083B



unit : mm
2092B



■ Any and all SANYO products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your SANYO representative nearest you before using any SANYO products described or contained herein in such applications.

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Specifications

Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

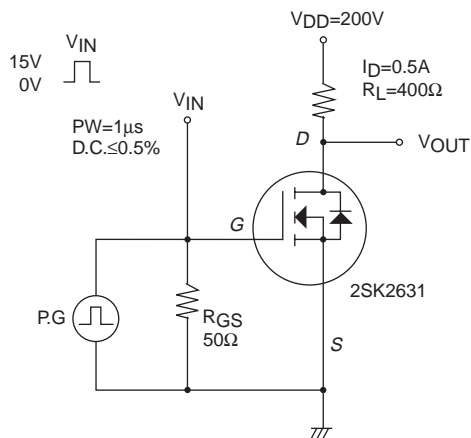
Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		800	V
Gate-to-Source Voltage	V_{GSS}		± 30	V
Drain Current (DC)	I_D		1	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu\text{s}$, duty cycle $\leq 1\%$	3	A
Allowable Power Dissipation	P_D	$T_c=25^\circ\text{C}$	30	W
			1.0	W
Channel Temperature	T_{ch}		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

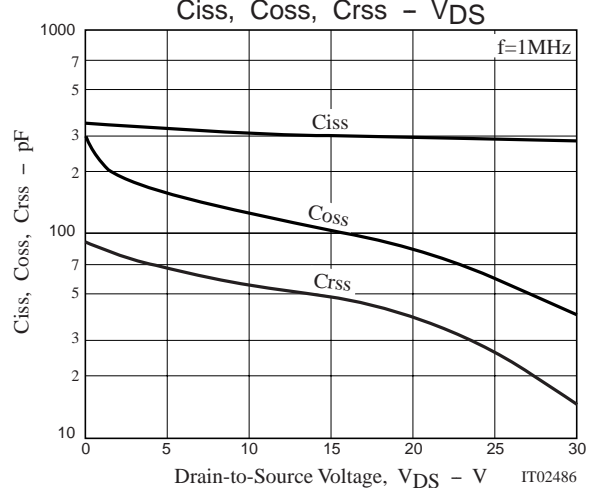
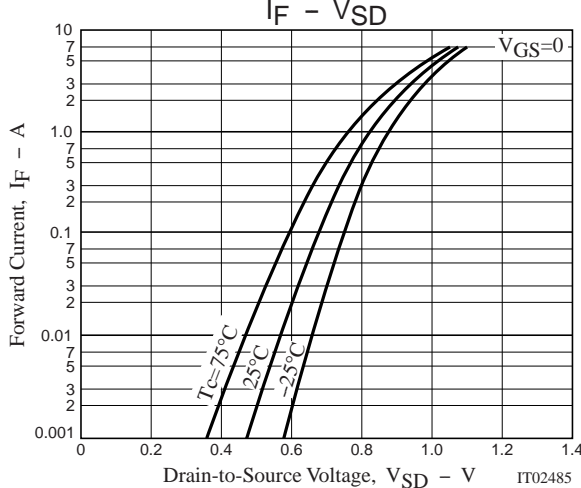
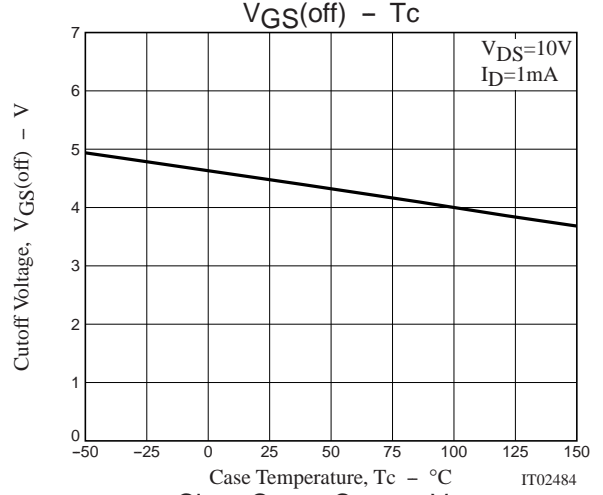
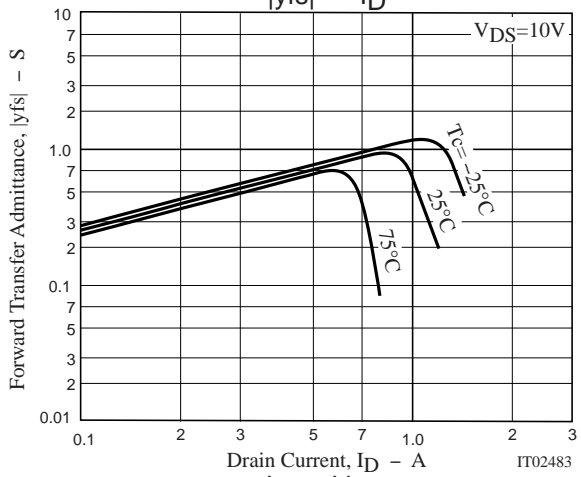
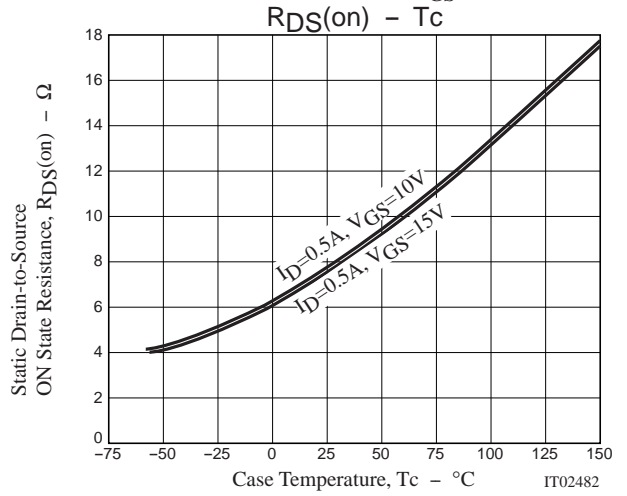
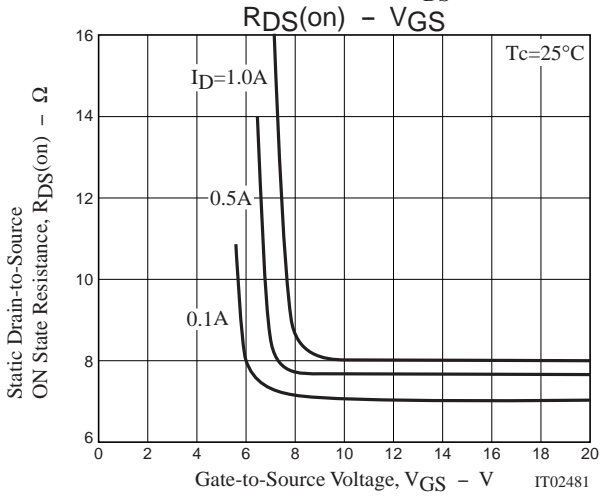
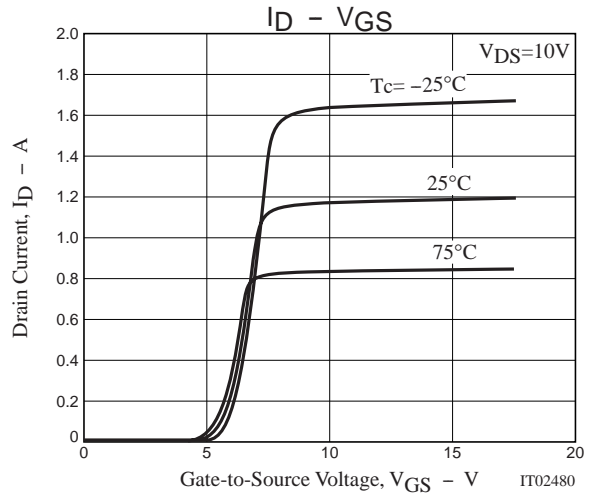
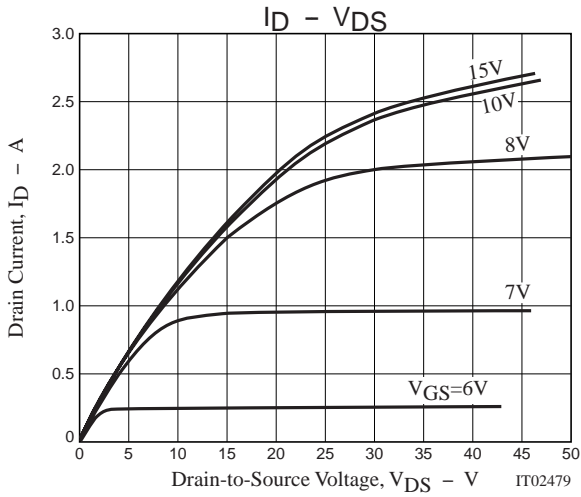
Electrical Characteristics at $T_a=25^\circ\text{C}$

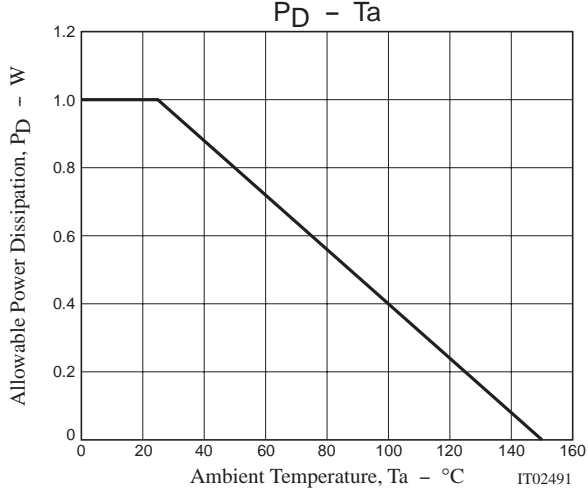
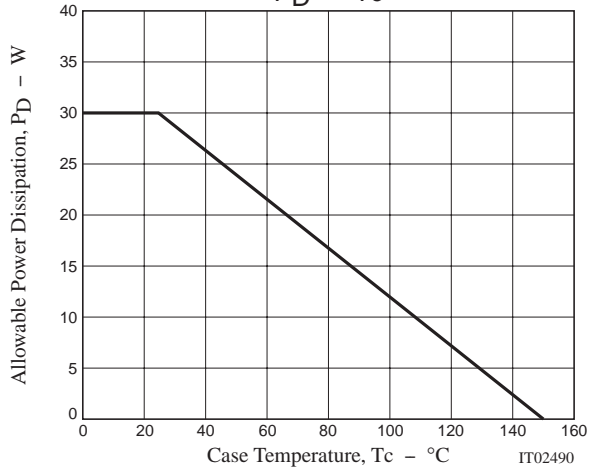
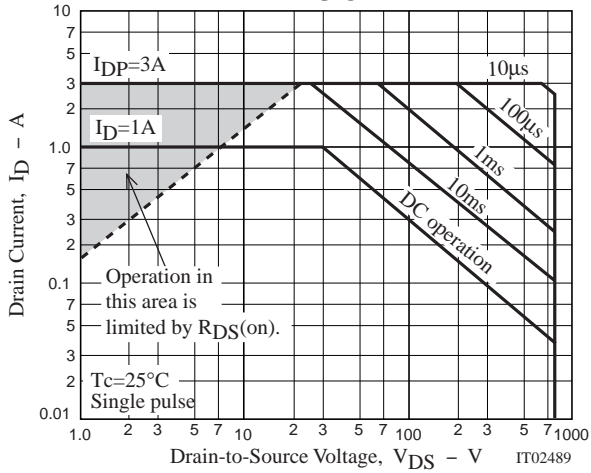
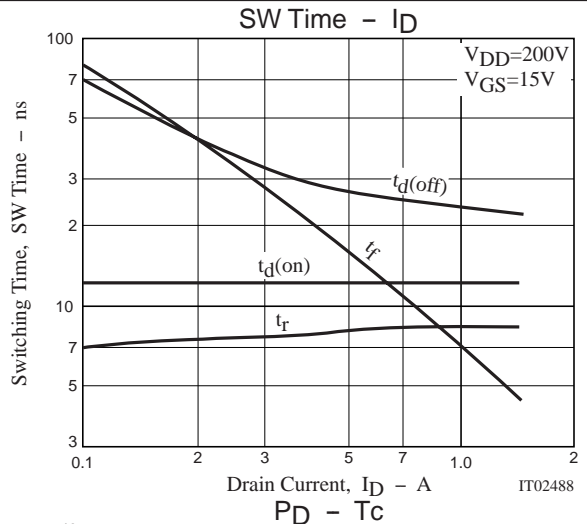
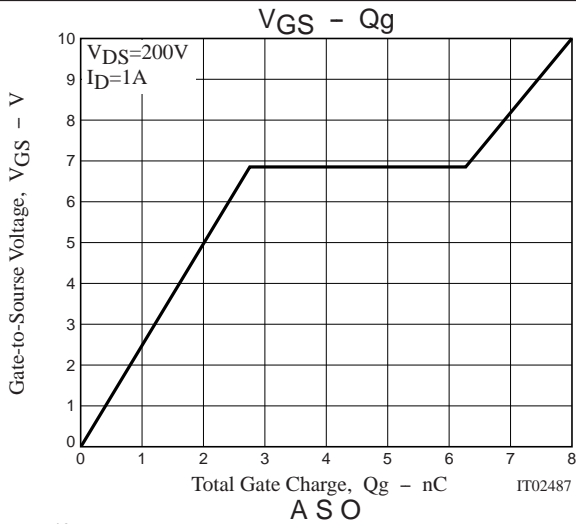
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1\text{mA}$, $V_{GS}=0$	800			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=800\text{V}$, $V_{GS}=0$			1.0	mA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 30\text{V}$, $V_{DS}=0$			± 100	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10\text{V}$, $I_D=1\text{mA}$	3.5		5.5	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10\text{V}$, $I_D=0.5\text{A}$	370	740		ms
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	$I_D=0.5\text{A}$, $V_{GS}=15\text{V}$		7.5	10	Ω
Input Capacitance	C_{iss}	$V_{DS}=20\text{V}$, $f=1\text{MHz}$		300		pF
Output Capacitance	C_{oss}	$V_{DS}=20\text{V}$, $f=1\text{MHz}$		85		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=20\text{V}$, $f=1\text{MHz}$		40		pF
Total Gate Charge	Q_g	$V_{DS}=200\text{V}$, $I_D=1\text{A}$, $V_{GS}=10\text{V}$		8		nC
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit		12		ns
Rise Time	t_r	See specified Test Circuit		8		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit		27		ns
Fall Time	t_f	See specified Test Circuit		16		ns
Diode Forward Voltage	V_{SD}	$I_S=1\text{A}$, $V_{GS}=0$		0.82	1.2	V

Marking : K2631

Switching Time Test Circuit







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