



2SK2555

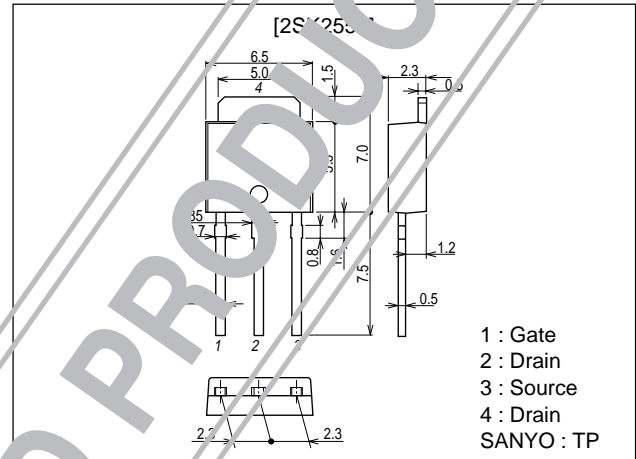
DC/DC Converter Applications

Features

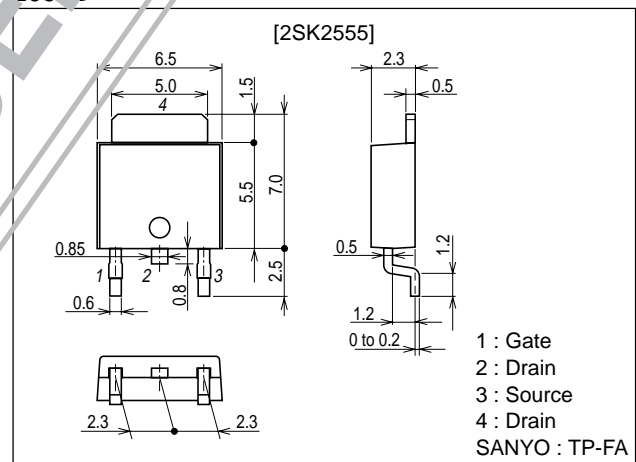
- Low ON-resistance.
- Ultrahigh-speed switching.
- 4V drive.

Package Dimensions

unit:mm
2083B



unit:mm
2083B



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Specifications

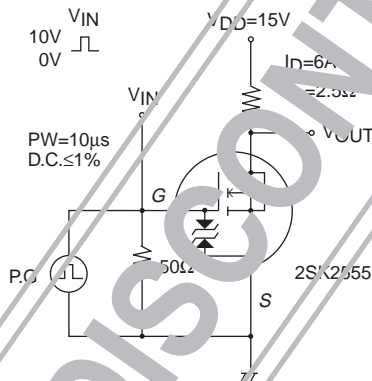
Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		30	V
Gate-to-Source Voltage	V _{GSS}		±25	V
Drain Current (DC)	I _D		12	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	48	A
Allowable Power Dissipation	P _D		1	W
		T _c =25°C	30	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

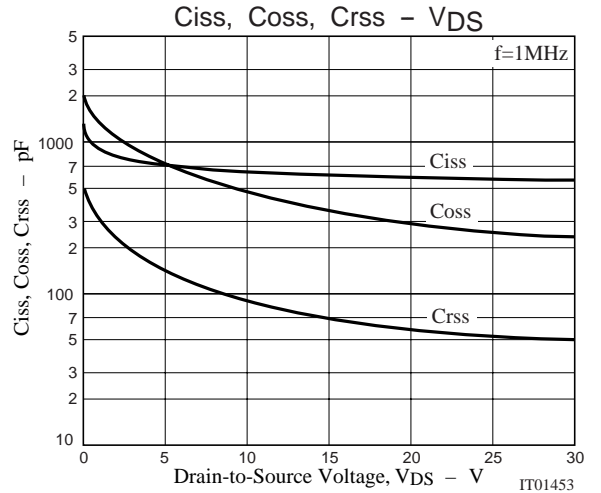
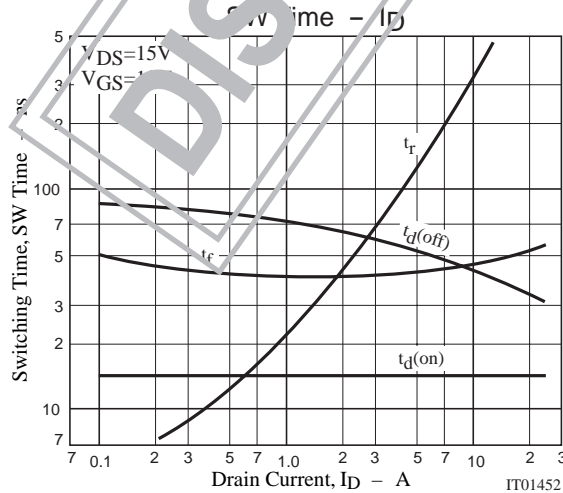
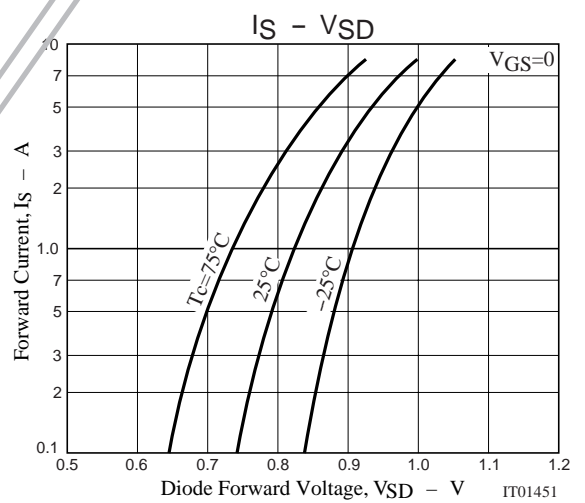
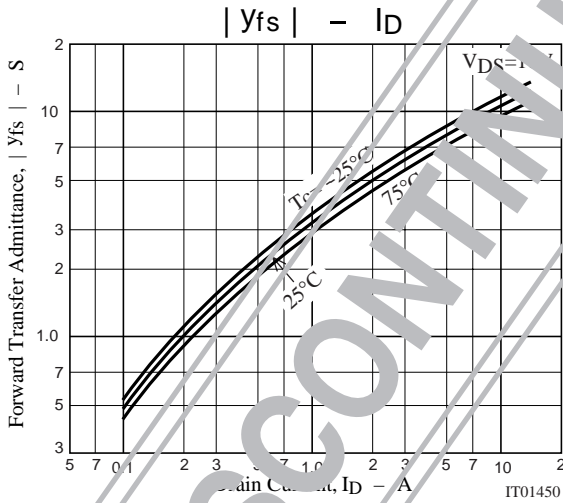
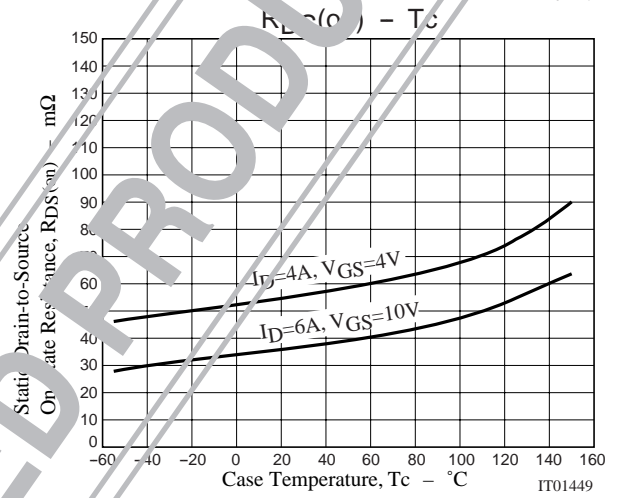
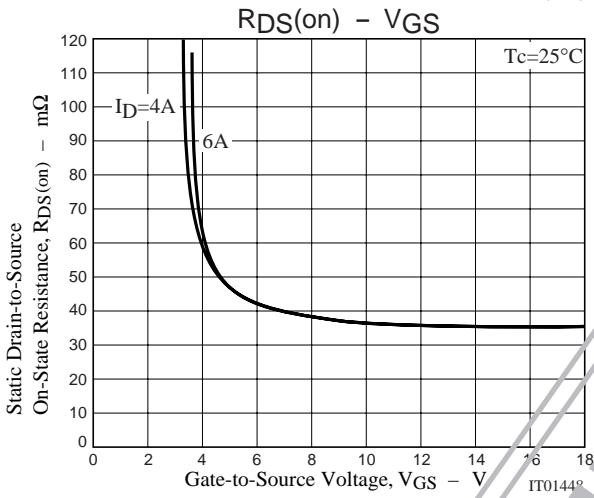
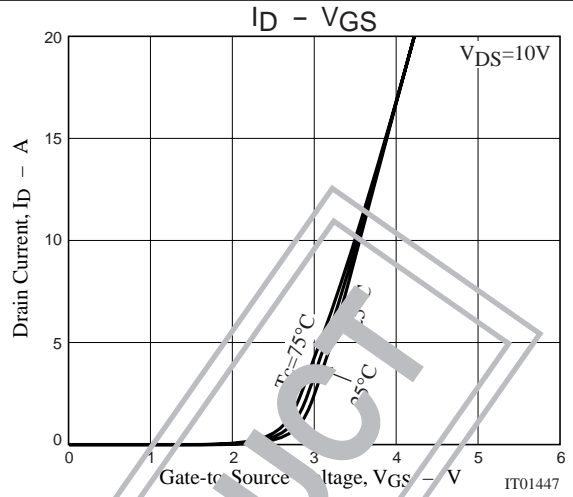
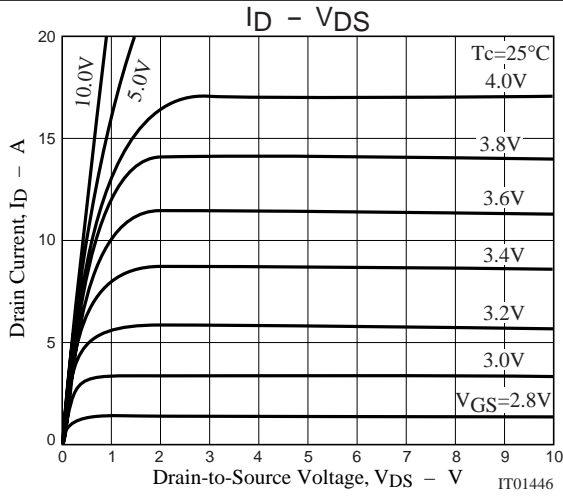
Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V _{(BR)DSS}	I _D =1mA, V _{GS} =0	30			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =30V, V _{GS} =0			100	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±20V, V _{DS} =0			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} =10V, I _D =1mA	1.0		2.5	V
Forward Transfer Admittance	y _{fs}	V _{DS} =10V, I _D =6A	6	8		S
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =6A, V _{GS} =10V		36	46	mΩ
	R _{DS(on)2}	I _D =4A, V _{GS} =4V		58	78	mΩ
Input Capacitance	C _{iss}	V _{DS} =10V, f=1MHz		650		pF
Output Capacitance	C _{oss}	V _{DS} =10V, f=1MHz		480		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =10V, f=1MHz		90		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit		15		ns
Rise Time	t _r	See specified Test Circuit		170		ns
Turn-OFF Delay Time	t _{d(off)}	See specified Test Circuit		50		ns
Fall Time	t _f	See specified Test Circuit		45		ns
Total Gate Charge	Q _g	V _{DS} =10V, V _{GS} =10V, I _D =1A		20		nC
Gate-to-Source Charge	Q _{gs}	V _{DS} =10V, V _{GS} =10V, I _D =1A		3		nC
Gate-to-Drain "Miller" Charge	Q _{gd}	V _{DS} =10V, V _{GS} =10V, I _D =1A		6		nC
Diode Forward Voltage	V _{SD}	I _S =6A, V _{GS} =0	1.0	1.2		V

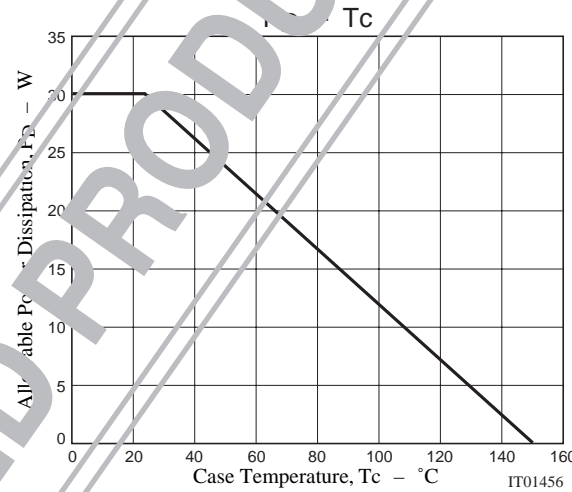
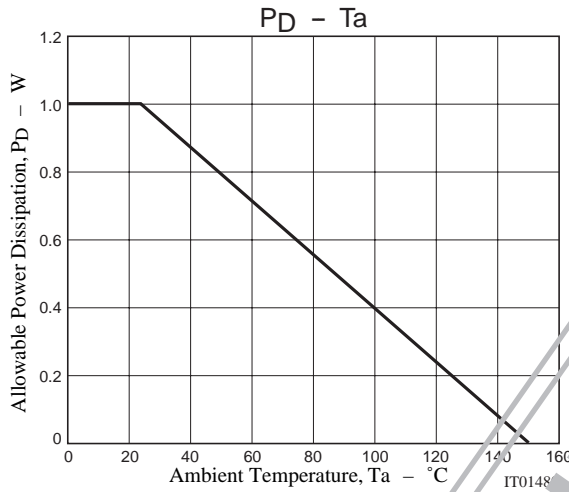
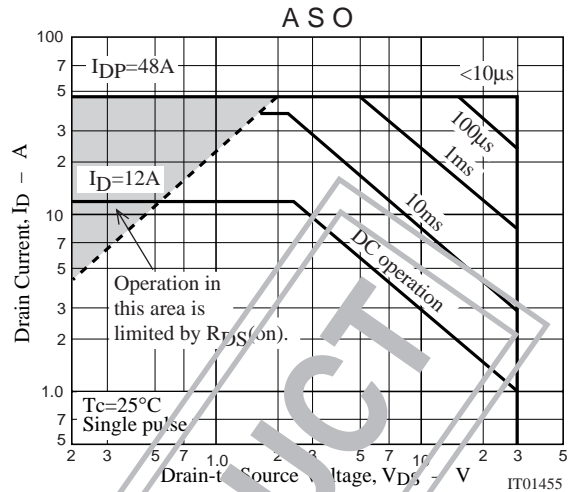
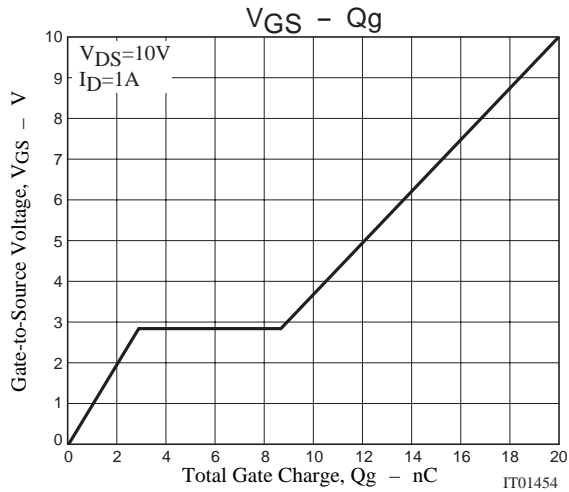
Switching Time Test Circuit



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