

SANYO	No.4689	2SK2154
		N-Channel MOS Silicon FET Very High-Speed Switching Applications

Features

- Low ON resistance.
- Very high-speed switching.
- Low-voltage drive.

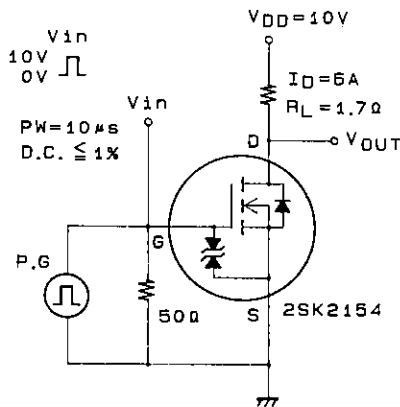
Absolute Maximum Ratings at Ta = 25°C

			unit
Drain-to-Source Voltage	V _{DSS}	20	V
Gate-to-Source Voltage	V _{GSS}	±18	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	Tc = 25°C	30 W
Channel Temperature	T _{ch}	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

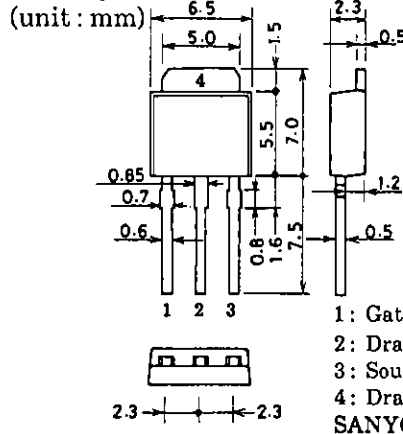
Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
D-S Breakdown Voltage	V _{(BR)DSS}	I _D = 1mA, V _{GS} = 0	20			V
G-S Breakdown Voltage	V _{(BR)GSS}	I _G = ±100μA, V _{DS} = 0	±18			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 20V, V _{GS} = 0			100	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} = ±12V, V _{DS} = 0			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} = 10V, I _D = 1mA	0.8		2.0	V
Forward Transfer Admittance	Y _{fs}	V _{DS} = 10V, I _D = 6A	7	10		S
Static Drain-to-Source on State Resistance	R _{DS(on)}	I _D = 6A, V _{GS} = 10V		30	42	mΩ
	R _{DS(on)}	I _D = 6A, V _{GS} = 4V		45	58	mΩ
Input Capacitance	C _{iss}	V _{DS} = 10V, f = 1MHz		1000		pF
Output Capacitance	C _{oss}	V _{DS} = 10V, f = 1MHz		650		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} = 10V, f = 1MHz		220		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit.		13		ns
Rise Time	t _r	"		35		ns
Turn-OFF Delay Time	t _{d(off)}	"		180		ns
Fall Time	t _f	"		120		ns
Diode Forward Voltage	V _{SD}	I _S = 8A, V _{GS} = 0	1.0	1.5		V
Drain Current	I _{DSX}	V _{DS} = 5V, V _{GS} = 0.1V			0.5	μA

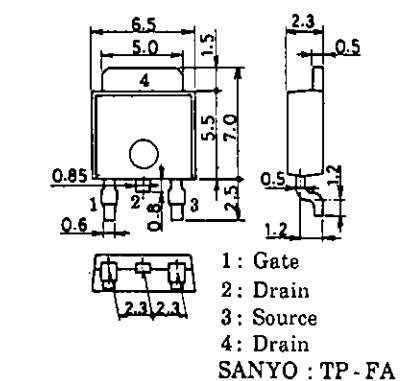
Switching Time Test Circuit

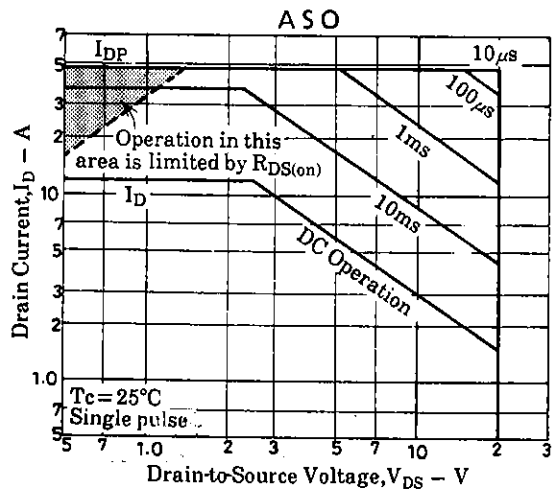
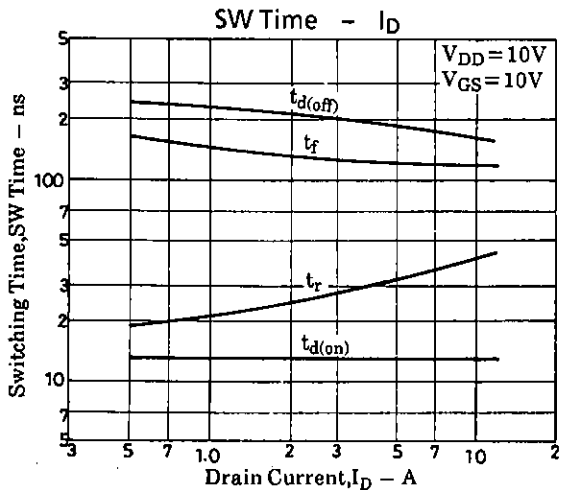
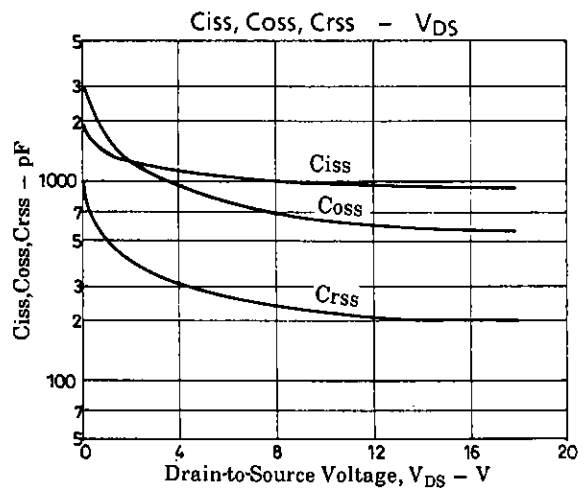
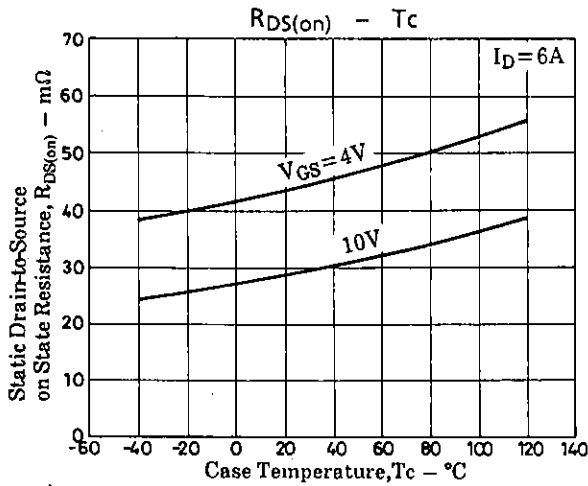
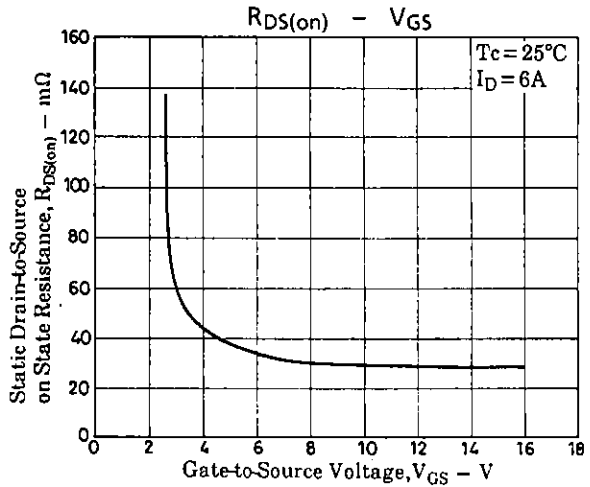
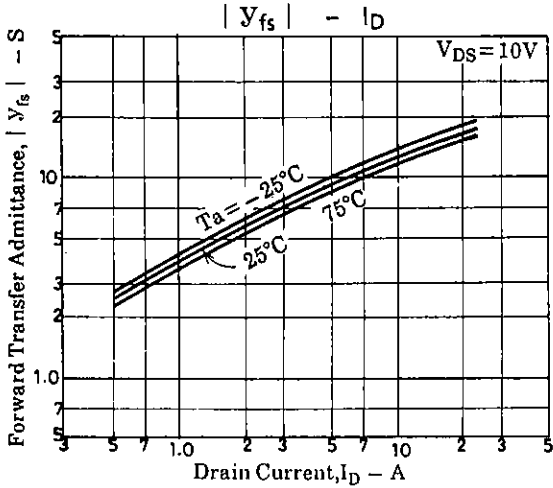
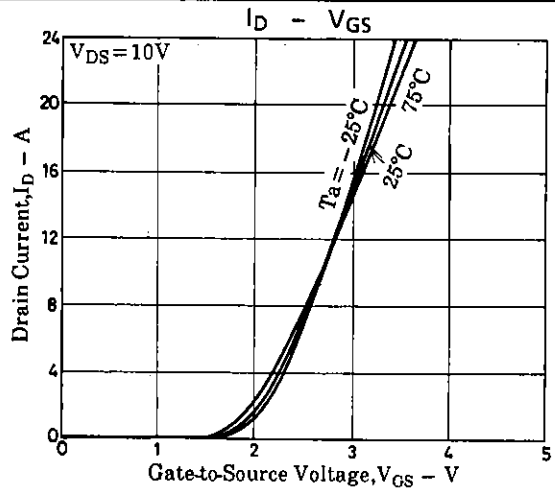
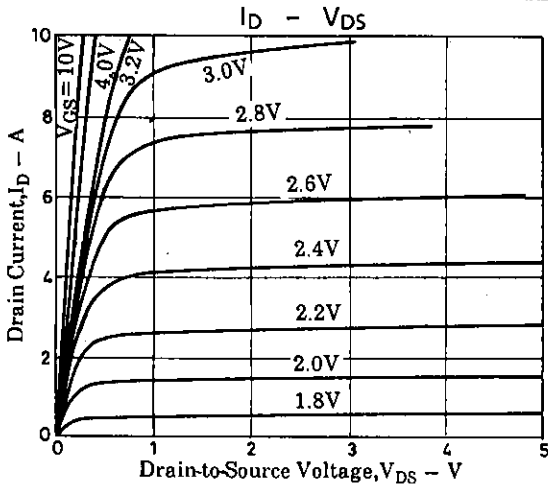


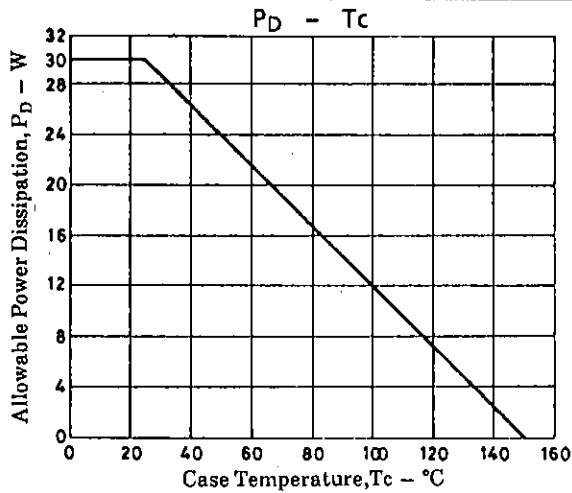
Package Dimensions 2083B



Package Dimensions 2092B







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