

SANYO	No.4647	2SK1896
		N-Channel MOS Silicon FET DC-DC Converter, Motor Drive Applications

Features

- Low ON resistance.
- Very high-speed switching.
- Low-voltage drive.
- Micaless package facilitating easy mounting.

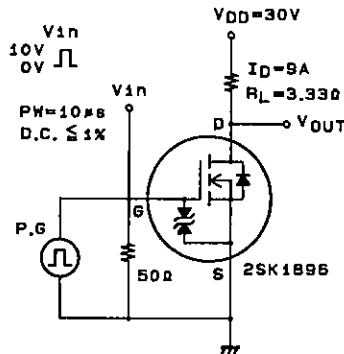
Absolute Maximum Ratings at Ta = 25°C

Drain-to-Source Voltage	V_{DS}		60	V	unit
Gate-to-Source Voltage	V_{GS}		± 20	V	
Drain Current(DC)	I_D		15	A	
Drain Current(Pulse)	I_{DP}	$PW \leq 10 \mu s, \text{ duty cycle} \leq 1\%$	60	A	
Allowable Power Dissipation	P_D	$T_c = 25^\circ C$	2.0	W	
			25	W	
Channel Temperature	T_{ch}		150	$^\circ C$	
Storage Temperature	T_{stg}		$-55 \text{ to } +150$	$^\circ C$	

Electrical Characteristics at Ta = 25°C

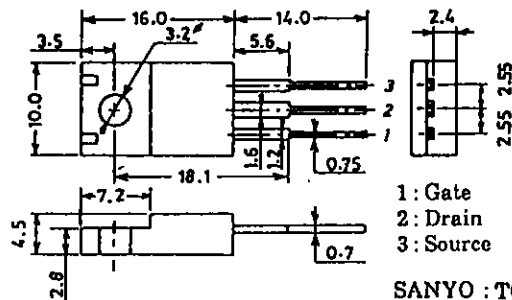
			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1mA, V_{GS} = 0$	60			V
G-S Breakdown Voltage	$V_{(BR)GSS}$	$I_G = \pm 100 \mu A, V_{DS} = 0$	± 20			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 60V, V_{GS} = 0$			100	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 16V, V_{DS} = 0$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10V, I_D = 1mA$	1.0		2.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 10V, I_D = 9A$	8	13		S
Static Drain-to-Source ON-State Resistance	$R_{DS(on)}$	$I_D = 9A, V_{GS} = 10V$		0.05	0.07	Ω
ON-State Resistance	$R_{DS(on)}$	$I_D = 9A, V_{GS} = 4V$		0.07	0.095	Ω
Input Capacitance	C_{iss}	$V_{DS} = 20V, f = 1MHz$		1230		pF
Output Capacitance	C_{oss}	$V_{DS} = 20V, f = 1MHz$		330		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 20V, f = 1MHz$		65		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		14		ns
Rise Time	t_r	/		35		ns
Turn-OFF Delay Time	$t_{d(off)}$	/		250		ns
Fall Time	t_f	/		120		ns
Diode Forward Voltage	V_{SD}	$I_S = 15A, V_{GS} = 0$	1.0	1.5		V

Switching Time Test Circuit



Package Dimensions 2063A

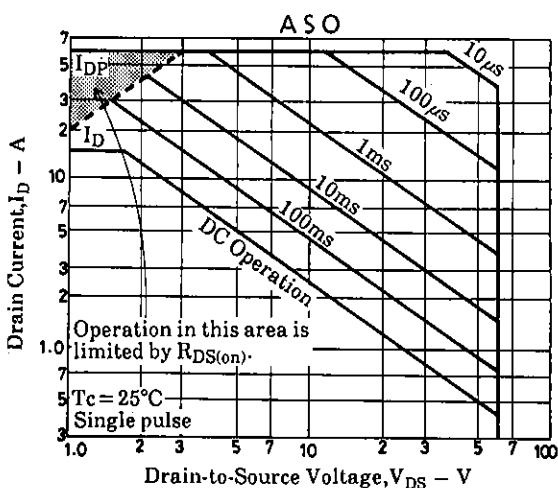
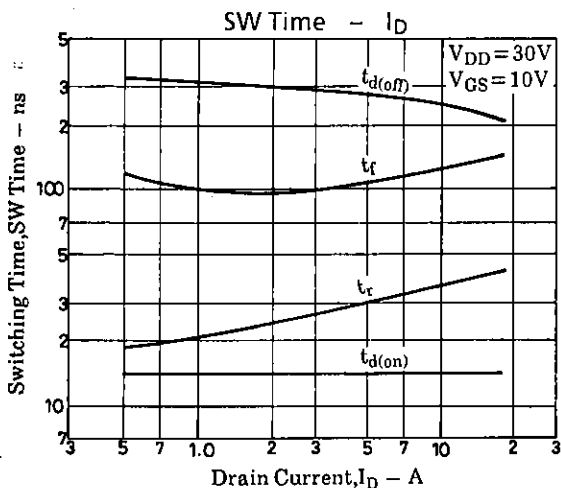
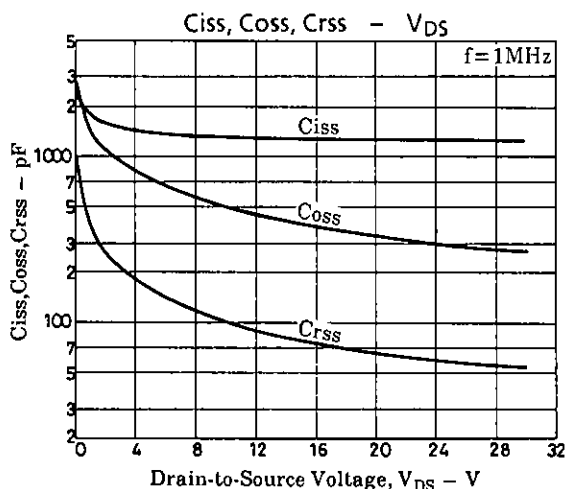
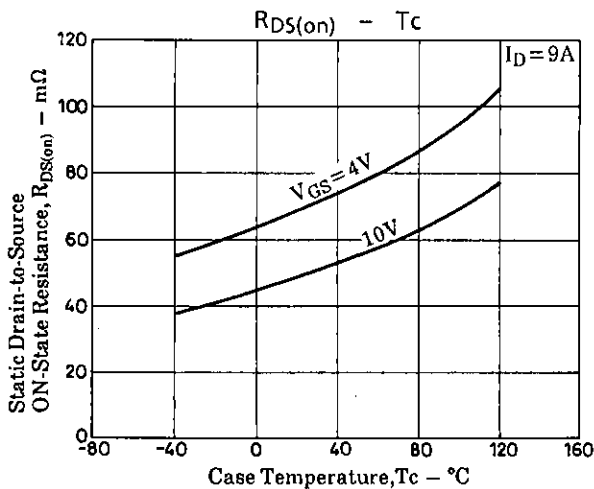
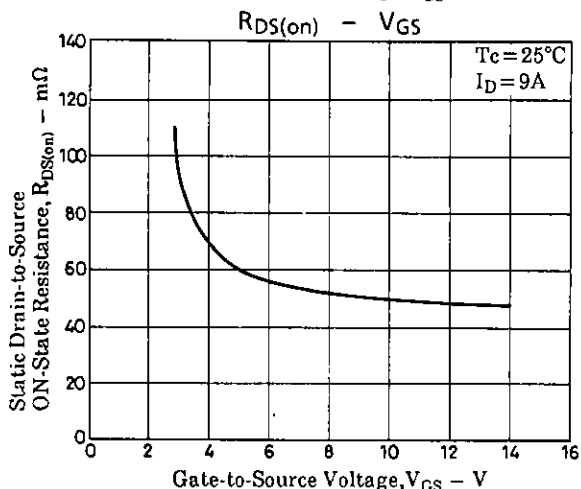
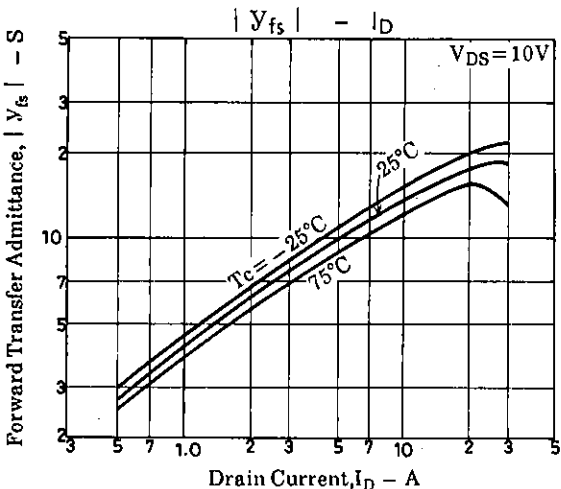
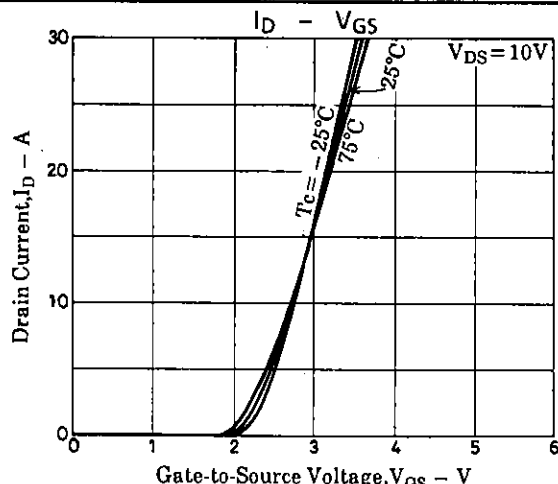
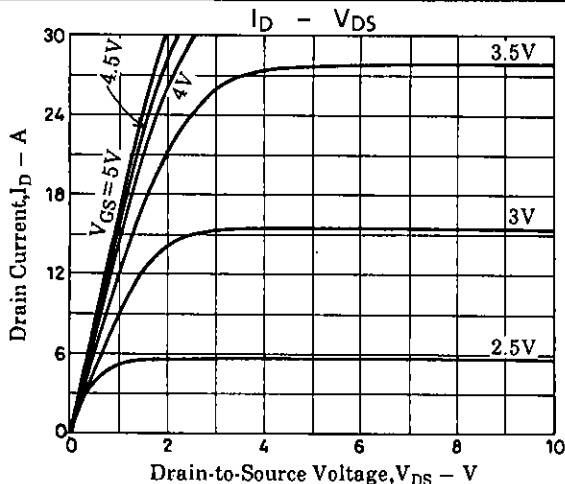
(unit: mm)

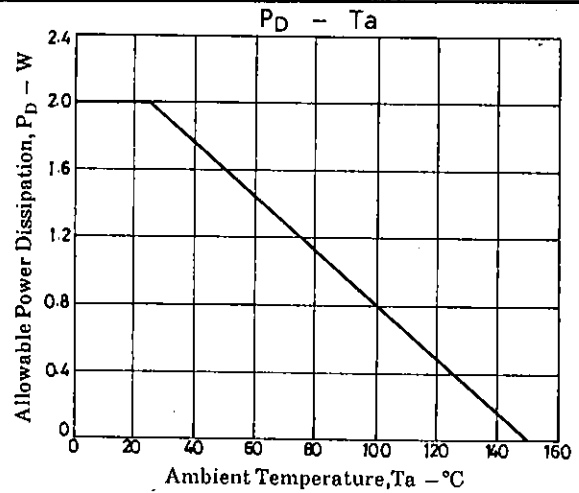
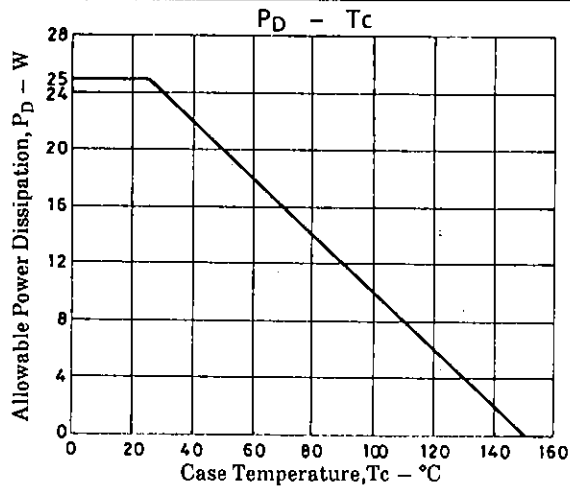


1: Gate
2: Drain
3: Source

SANYO: TO-220ML

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