

SANYO	No.4645	<h1 style="margin: 0;">2SK1890</h1> <p style="margin: 0;">N-Channel MOS Silicon FET</p> <p style="margin: 0;">Very High-Speed Switching Applications</p>
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Features

- Low ON resistance
- Very high-speed switching
- Low-voltage drive
- Surface mount type device making the following possible.
 - Reduction in the number of manufacturing processes for 2SK1890-applied equipment.
 - High-density surface mount applications.
 - Small size of 2SK1890-applied equipment.

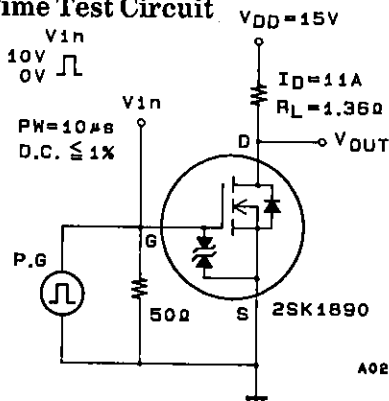
Absolute Maximum Ratings at Ta = 25°C

Drain-to-Source Voltage	V_{DS}		30	V	unit
Gate-to-Source Voltage	V_{GS}		±20	V	
Drain Current(DC)	I_D		22	A	
Drain Current(Pulse)	I_{DP}	$PW \leq 10\mu s, \text{duty cycle} \leq 1\%$	88	A	
Allowable Power Dissipation	P_D		1.65	W	
		$T_c = 25^\circ C$	60	W	
Channel Temperature	T_{ch}		150	°C	
Storage Temperature	T_{stg}		-55 to +150	°C	

Electrical Characteristics at Ta = 25°C

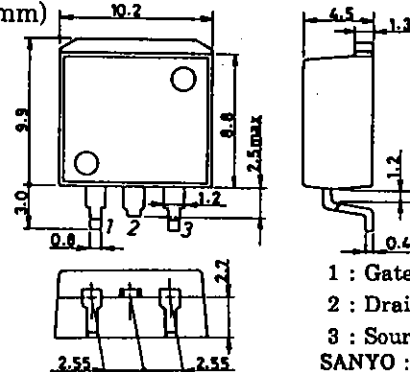
			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1mA, V_{GS} = 0$	30			V
G-S Breakdown Voltage	$V_{(BR)GSS}$	$I_G = \pm 100\mu A, V_{DS} = 0$	±20			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 30V, V_{GS} = 0$			100	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 16V, V_{DS} = 0$			±10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10V, I_D = 1mA$	1.0		2.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 10V, I_D = 11A$	9	15		S
Static Drain-to-Source ON-State Resistance	$R_{DS(on)}$	$I_D = 11A, V_{GS} = 10V$	0.030	0.040		Ω
Input Capacitance	C_{iss}	$V_{DS} = 10V, f = 1MHz$	1300			pF
Output Capacitance	C_{oss}	$V_{DS} = 10V, f = 1MHz$	720			pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 10V, f = 1MHz$	240			pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		14		ns
Rise Time	t_r	"		50		ns
Turn-OFF Delay Time	$t_{d(off)}$	"		290		ns
Fall Time	t_f	"		150		ns
Diode Forward Voltage	V_{SD}	$I_S = 22A, V_{GS} = 0$	1.0	1.5		V

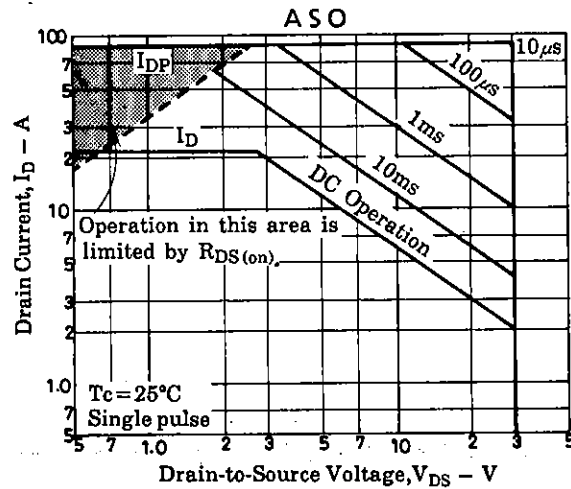
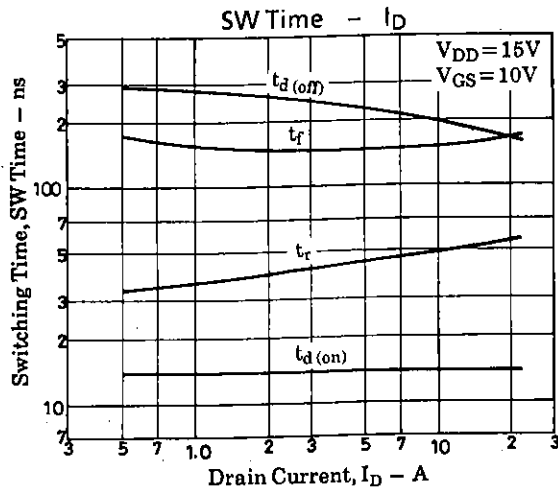
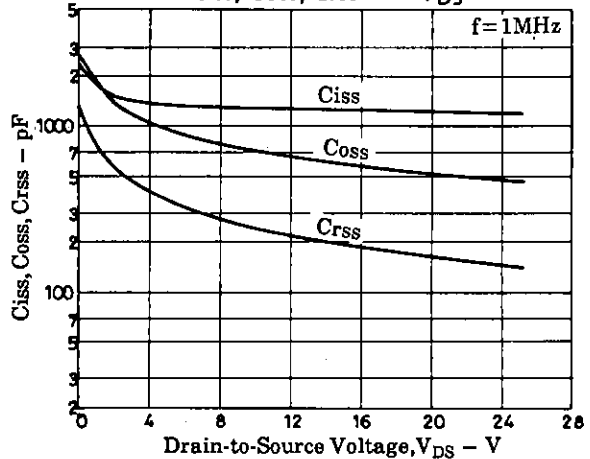
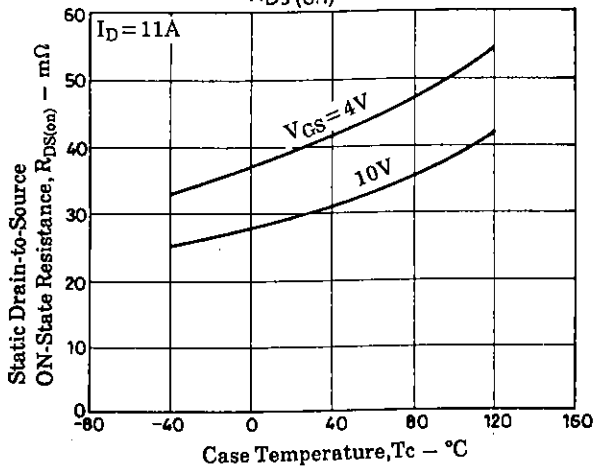
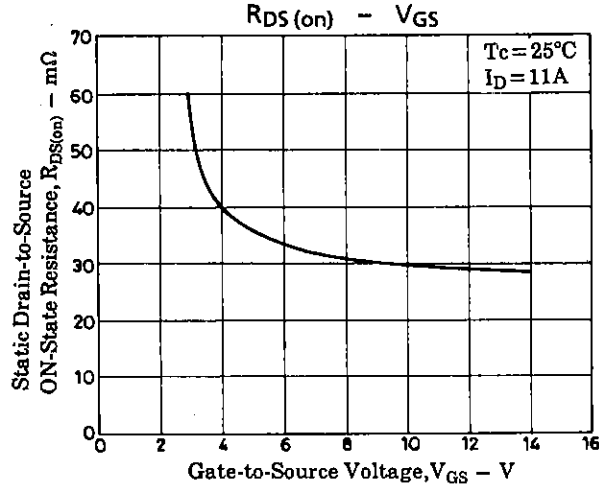
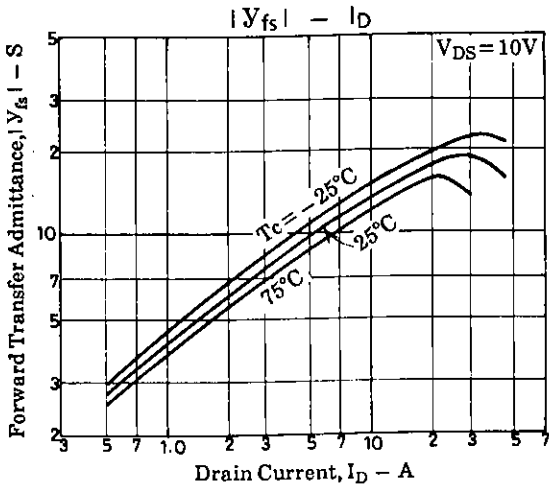
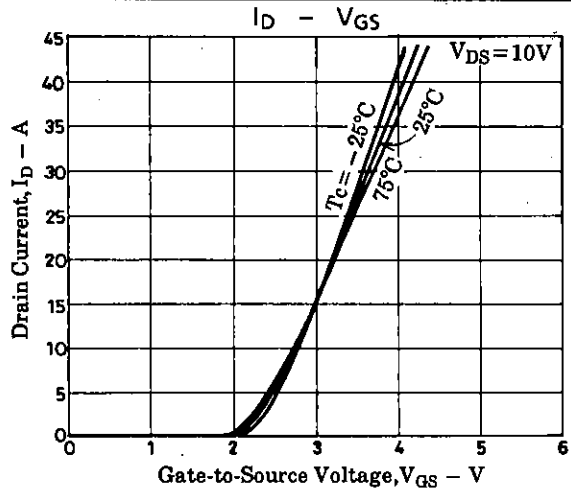
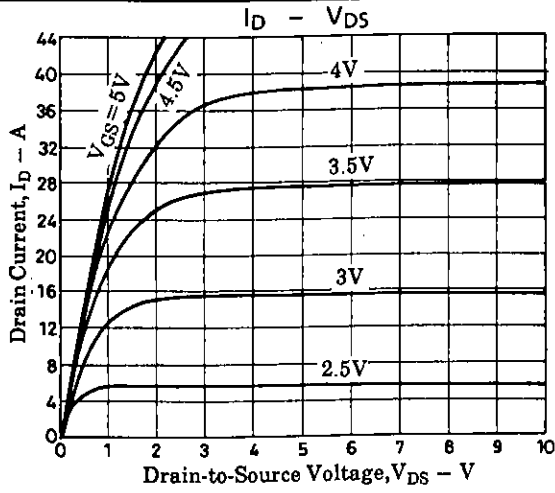
Switching Time Test Circuit

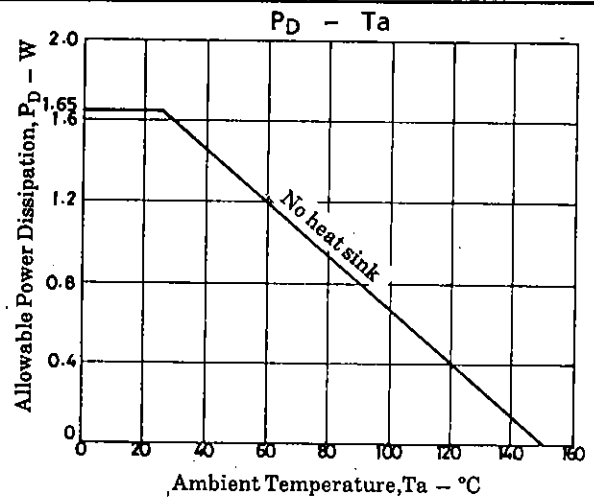
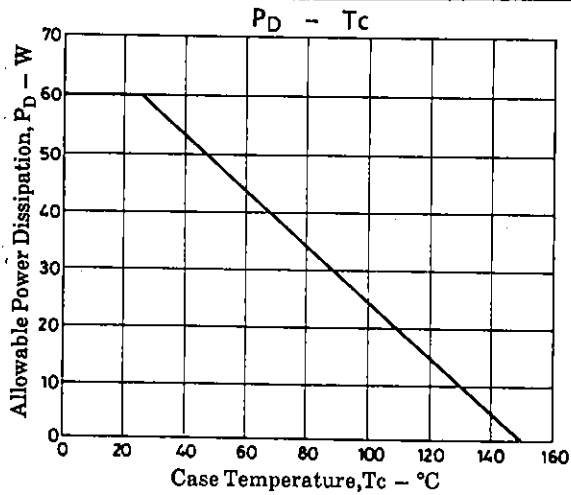


Package Dimensions 2090A

(unit: mm)







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