

<b>SANYO</b>	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.

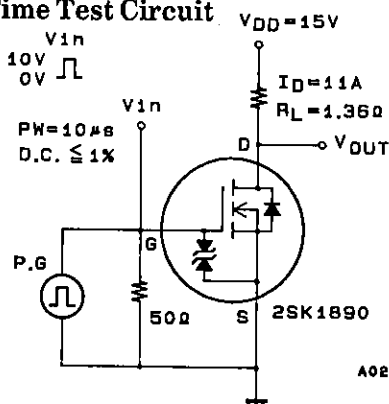
**Absolute Maximum Ratings at Ta = 25°C**

			unit
Drain-to-Source Voltage	V <sub>DSS</sub>	30	V
Gate-to-Source Voltage	V <sub>GSS</sub>	±20	V
Drain Current(DC)	I <sub>D</sub>	22	A
Drain Current(Pulse)	I <sub>DP</sub>	PW ≤ 10μs, duty cycle ≤ 1% 88 A	
Allowable Power Dissipation	P <sub>D</sub>	1.65	W
		Tc = 25°C	
Channel Temperature	T <sub>ch</sub>	60	W
Storage Temperature	T <sub>stg</sub>	150	°C
		-55 to +150 °C	

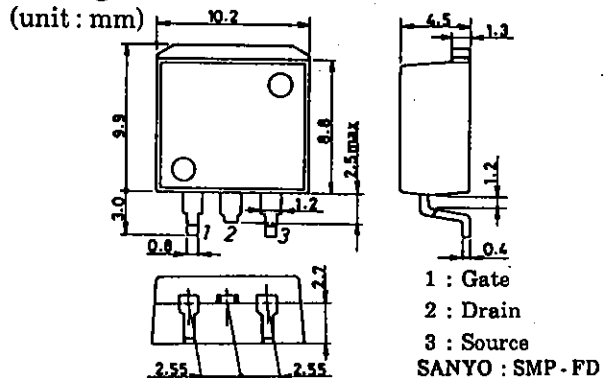
**Electrical Characteristics at Ta = 25°C**

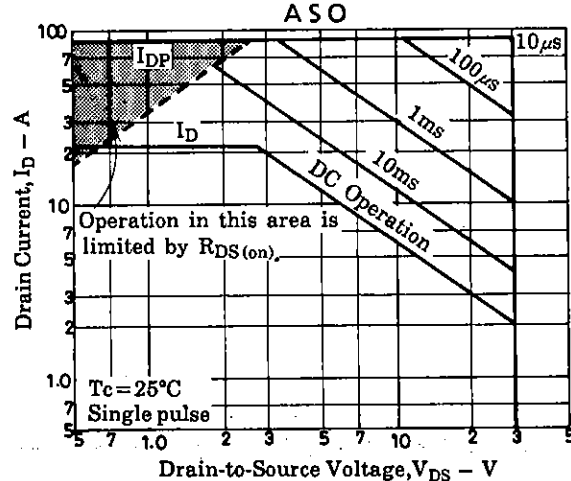
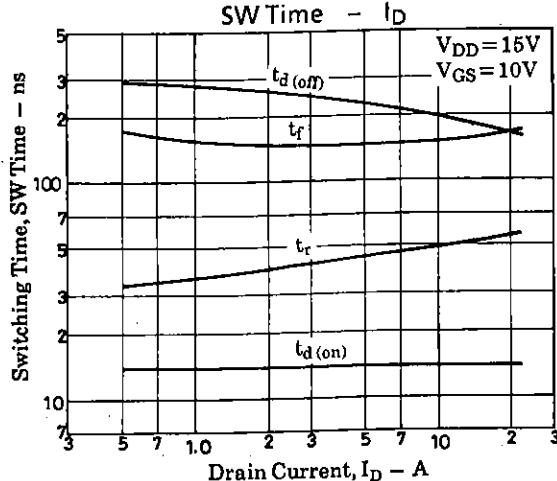
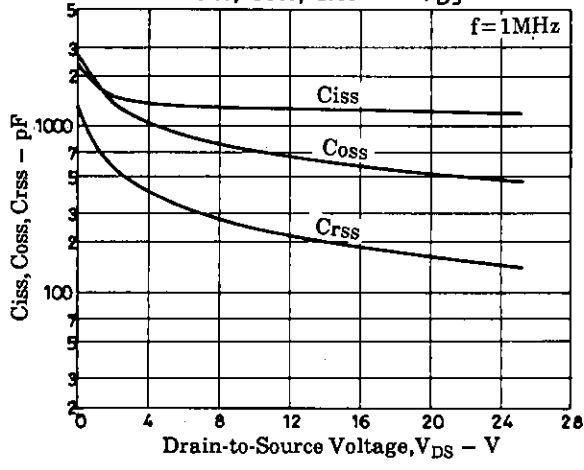
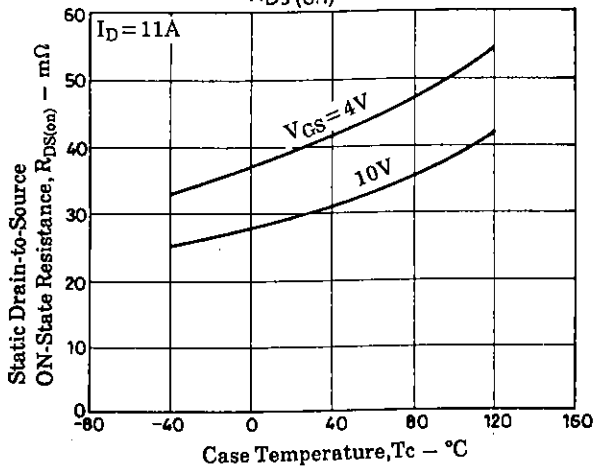
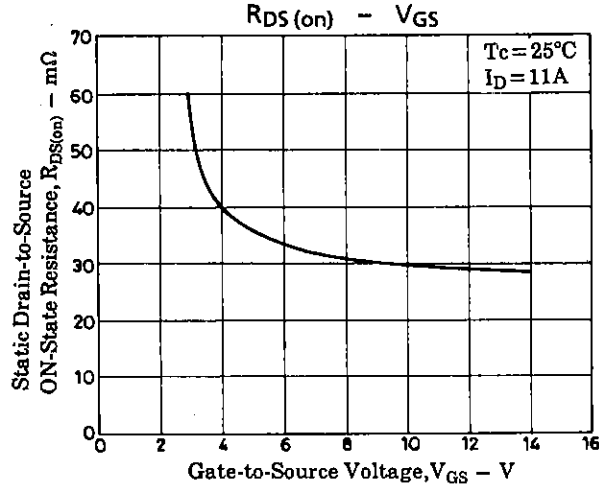
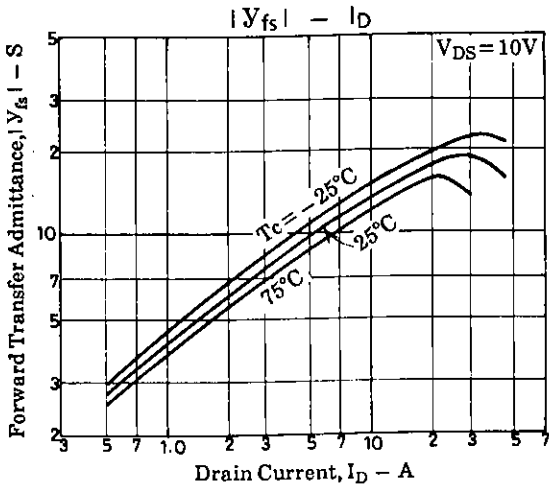
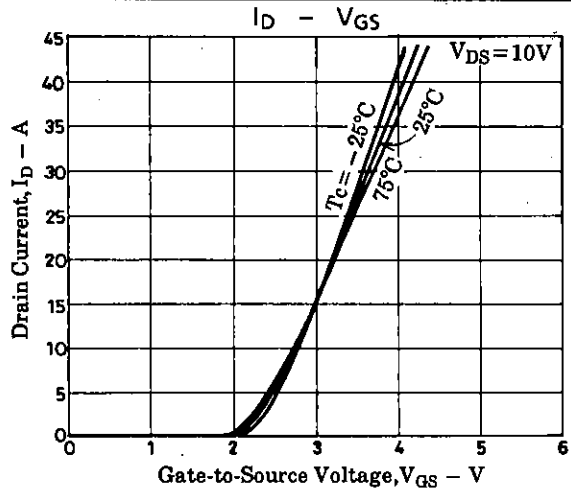
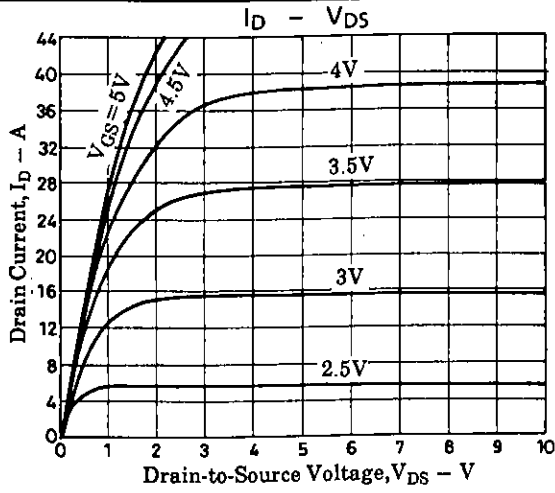
			min	typ	max	unit
D-S Breakdown Voltage	V <sub>(BR)DSS</sub>	I <sub>D</sub> = 1mA, V <sub>GS</sub> = 0	30			V
G-S Breakdown Voltage	V <sub>(BR)GSS</sub>	I <sub>G</sub> = ±100μA, V <sub>DS</sub> = 0	±20			V
Zero-Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> = 30V, V <sub>GS</sub> = 0			100	μA
Gate-to-Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> = ±16V, V <sub>DS</sub> = 0			±10	μA
Cutoff Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> = 10V, I <sub>D</sub> = 1mA	1.0		2.0	V
Forward Transfer Admittance	Y <sub>fs</sub>	V <sub>DS</sub> = 10V, I <sub>D</sub> = 11A	9	15		S
Static Drain-to-Source ON-State Resistance	R <sub>DS(on)</sub>	I <sub>D</sub> = 11A, V <sub>GS</sub> = 10V	0.030	0.040		Ω
	R <sub>DS(on)</sub>	I <sub>D</sub> = 11A, V <sub>GS</sub> = 4V	0.040	0.055		Ω
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> = 10V, f = 1MHz		1300		pF
Output Capacitance	C <sub>oss</sub>	V <sub>DS</sub> = 10V, f = 1MHz		720		pF
Reverse Transfer Capacitance	C <sub>rss</sub>	V <sub>DS</sub> = 10V, f = 1MHz		240		pF
Turn-ON Delay Time	t <sub>d(on)</sub>	See specified Test Circuit.		14		ns
Rise Time	t <sub>r</sub>	∕		50		ns
Turn-OFF Delay Time	t <sub>d(off)</sub>	∕		290		ns
Fall Time	t <sub>f</sub>	∕		150		ns
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> = 22A, V <sub>GS</sub> = 0	1.0	1.5		V

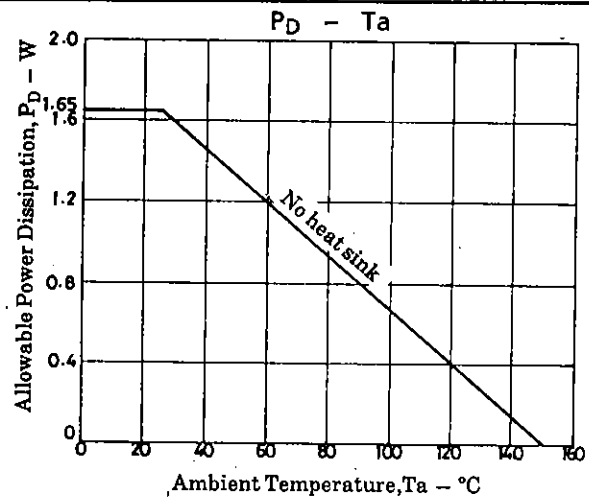
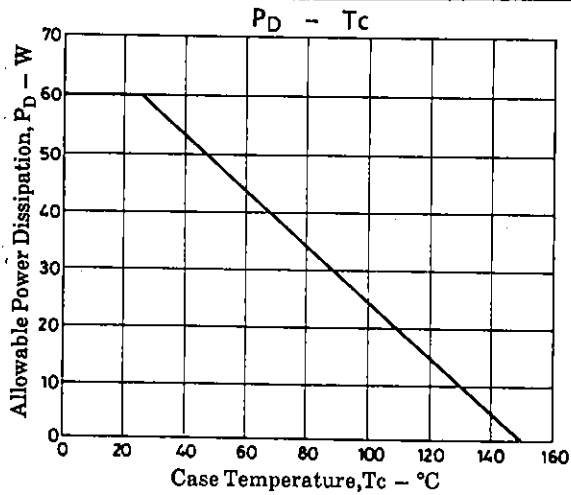
**Switching Time Test Circuit**



**Package Dimensions 2090A**







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