

<b>SANYO</b>	No.3833	<b>2SK1738</b> N-Channel MOS Silicon FET Very High-Speed Switching Applications
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**Features**

- Low ON resistance.
- Very high-speed switching.
- Low-voltage drive.
- Its height onboard is 9.5mm.
- Meets radial taping.

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

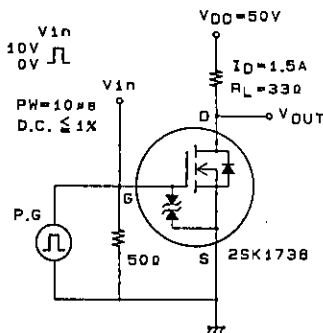
			unit
Drain to Source Voltage	V <sub>DSS</sub>	100	V
Gate to Source Voltage	V <sub>GSS</sub>	±15	V
Drain Current(DC)	I <sub>D</sub>	3	A
Drain Current(Pulse)	I <sub>DP</sub>	12	A
Allowable Power Dissipation	P <sub>D</sub>	1.5	W
Channel Temperature	T <sub>ch</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

PW ≤ 10μs, duty cycle ≤ 1%

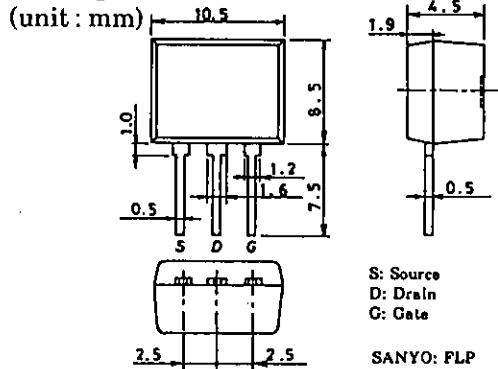
**Electrical Characteristics at Ta = 25°C**

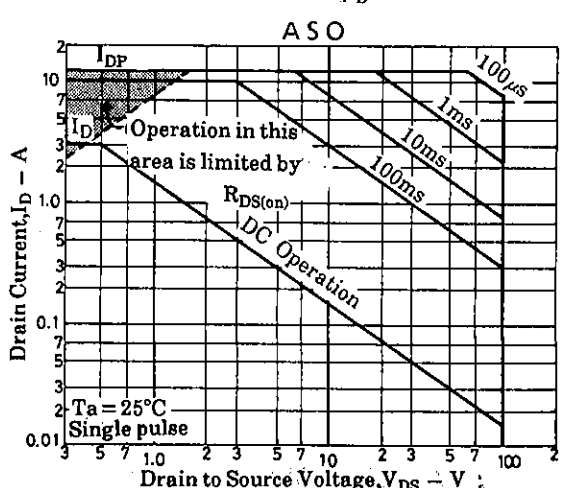
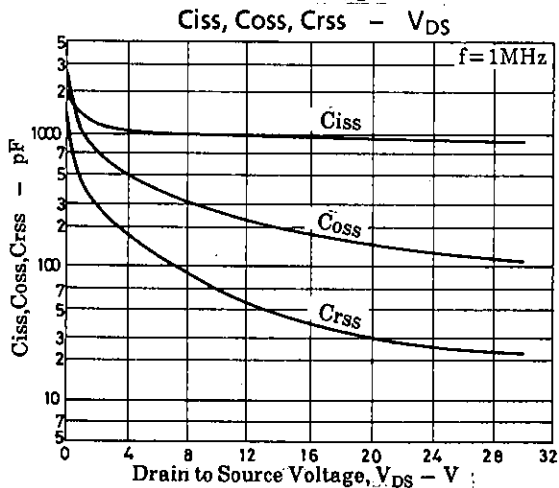
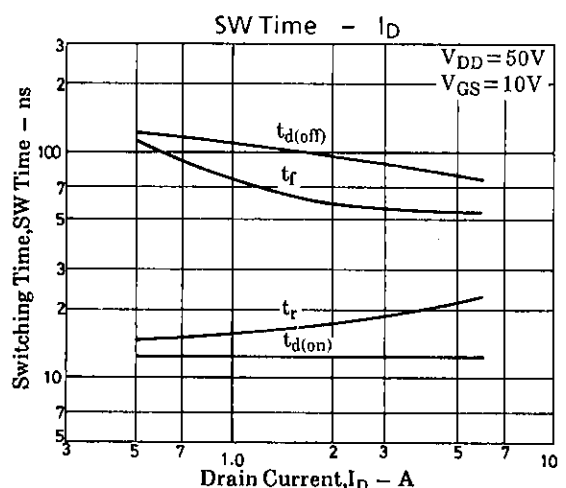
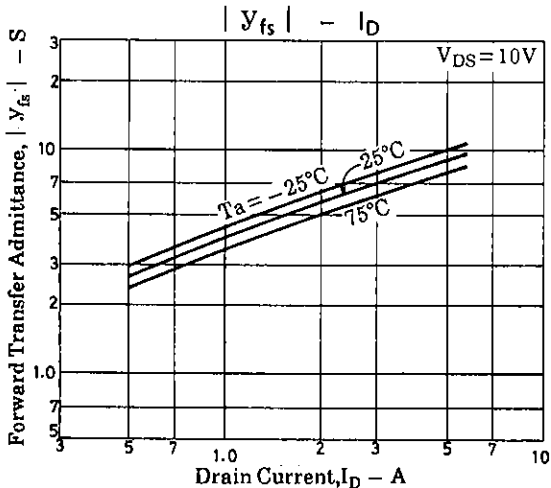
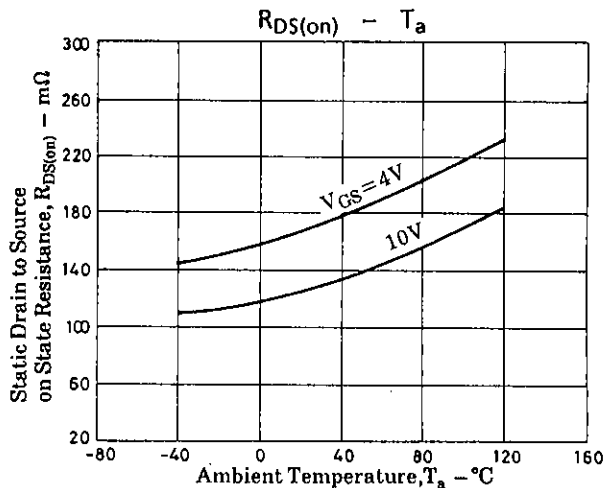
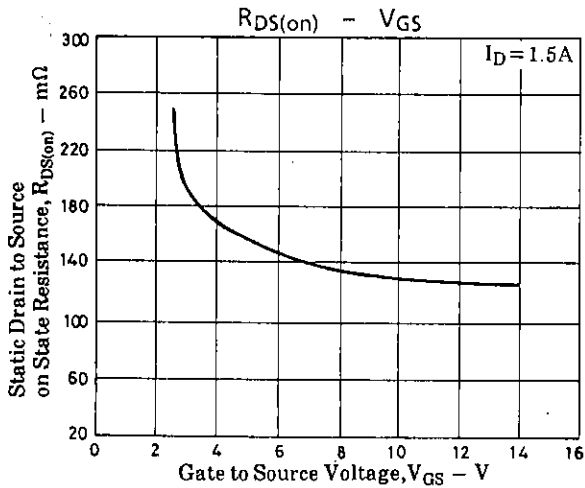
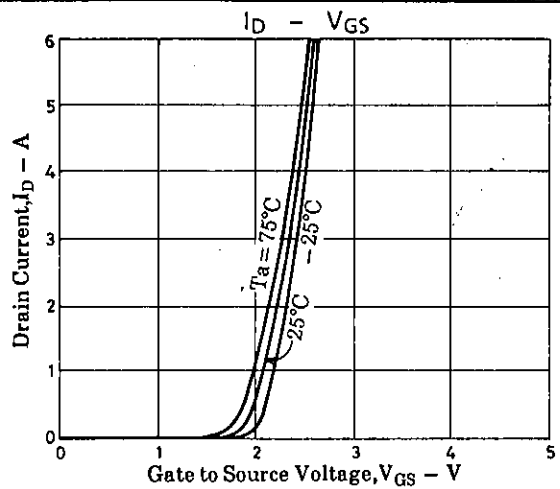
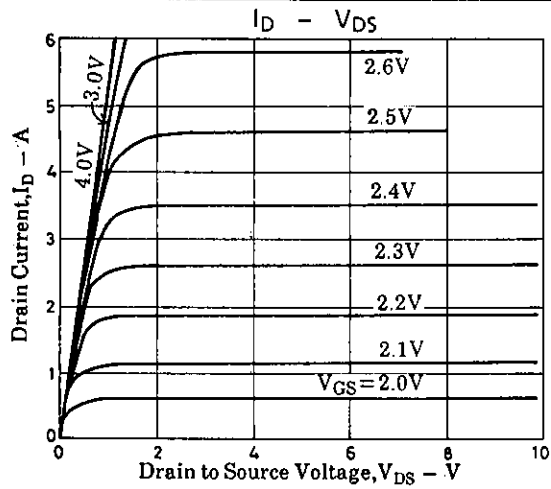
			min	typ	max	unit
D-S Breakdown Voltage	V <sub>(BR)DSS</sub>	I <sub>D</sub> = 1mA, V <sub>GS</sub> = 0	100			V
G-S Breakdown Voltage	V <sub>(BR)GSS</sub>	I <sub>G</sub> = ±100μA, V <sub>DS</sub> = 0	±15			V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> = 100V, V <sub>GS</sub> = 0			100	μA
Gate to Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> = ±12V, 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> = 1.5A	3	5		S
Static Drain to Source on State Resistance	R <sub>DS(on)</sub>	I <sub>D</sub> = 1.5A, V <sub>GS</sub> = 10V	0.13	0.17		Ω
	R <sub>DS(on)</sub>	I <sub>D</sub> = 1.5A, V <sub>GS</sub> = 4V	0.17	0.22		Ω
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> = 20V, f = 1MHz		950		pF
Output Capacitance	C <sub>oss</sub>	V <sub>DS</sub> = 20V, f = 1MHz		150		pF
Reverse Transfer Capacitance	C <sub>rss</sub>	V <sub>DS</sub> = 20V, f = 1MHz		30		pF
Turn-ON Delay Time	t <sub>d(on)</sub>	See specified Test Circuit.		13		ns
Rise Time	t <sub>r</sub>	∕		18		ns
Turn-OFF Delay Time	t <sub>d(off)</sub>	∕		100		ns
Fall Time	t <sub>f</sub>	∕		65		ns
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> = 3A, V <sub>GS</sub> = 0	1.0	1.5		V

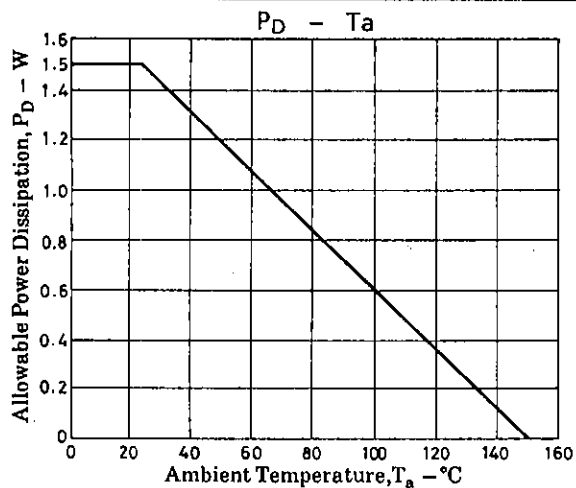
**Switching Time Test Circuit**



**Package Dimensions 2085**







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