

<b>SANYO</b>	No.3820	<b>2SK1725</b>
		N-Channel MOS Silicon FET Very High-Speed Switching Applications

**Features**

- Low ON resistance.
- Very high-speed switching.
- Low-voltage drive.
- Meets radial taping.

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

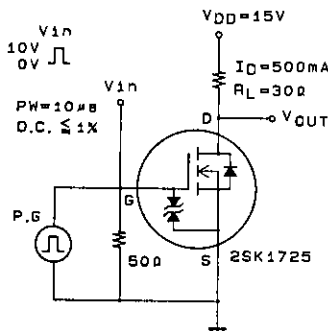
			unit
Drain to Source Voltage	V <sub>DSS</sub>	30	V
Gate to Source Voltage	V <sub>GSS</sub>	±15	V
Drain Current(DC)	I <sub>D</sub>	1	A
Drain Current(Pulse)	I <sub>DP</sub>	4	A
Allowable Power Dissipation	P <sub>D</sub>	1	W
Channel Temperature	T <sub>ch</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

PW ≤ 10 μs, duty cycle ≤ 1%

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

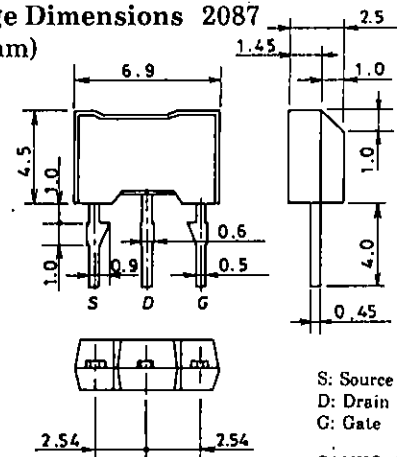
			min	typ	max	unit
D-S Breakdown Voltage	V <sub>(BR)DSS</sub>	I <sub>D</sub> = 1mA, V <sub>GS</sub> = 0	30			V
Zero Gate Voltage	I <sub>DSS</sub>	V <sub>DS</sub> = 30V, V <sub>GS</sub> = 0			10	μA
Drain Current						
Gate to Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> = ±12V, V <sub>DS</sub> = 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> = 500mA	0.6	1.0		S
Static Drain to Source	R <sub>DS(on)</sub>	I <sub>D</sub> = 500mA, V <sub>GS</sub> = 10V		0.5	0.75	Ω
on State Resistance	R <sub>DS(on)</sub>	I <sub>D</sub> = 500mA, V <sub>GS</sub> = 4V		0.75	1.1	Ω
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> = 10V, f = 1MHz		50		pF
Output Capacitance	C <sub>oss</sub>	V <sub>DS</sub> = 10V, f = 1MHz		35		pF
Reverse Transfer Capacitance	C <sub>rss</sub>	V <sub>DS</sub> = 10V, f = 1MHz		10		pF
Turn-ON Delay Time	t <sub>d(on)</sub>	See specified Test Circuit.		5		ns
Rise Time	t <sub>r</sub>	"/		10		ns
Turn-OFF Delay Time	t <sub>d(off)</sub>	"/		30		ns
Fall Time	t <sub>f</sub>	"/		20		ns
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> = 1A, V <sub>GS</sub> = 0		1.0		V

**Switching Time Test Circuit**



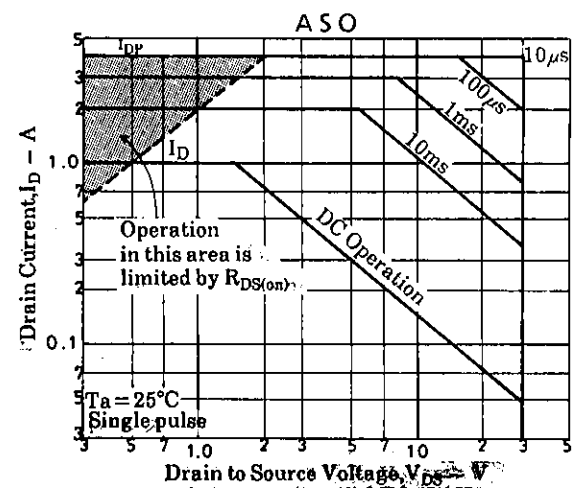
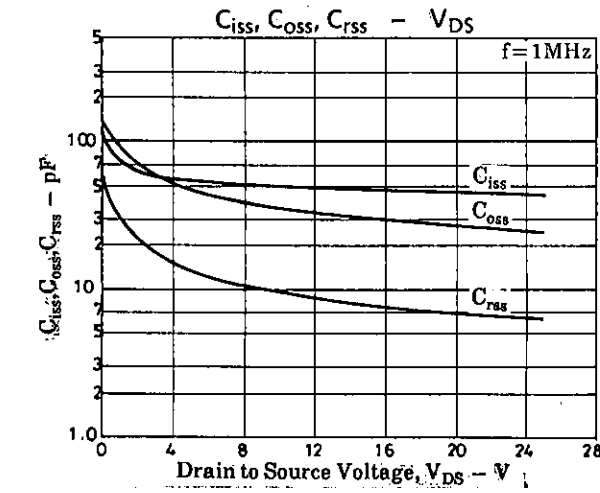
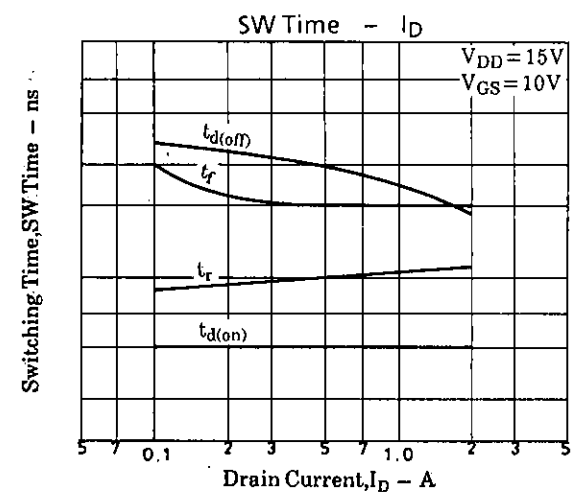
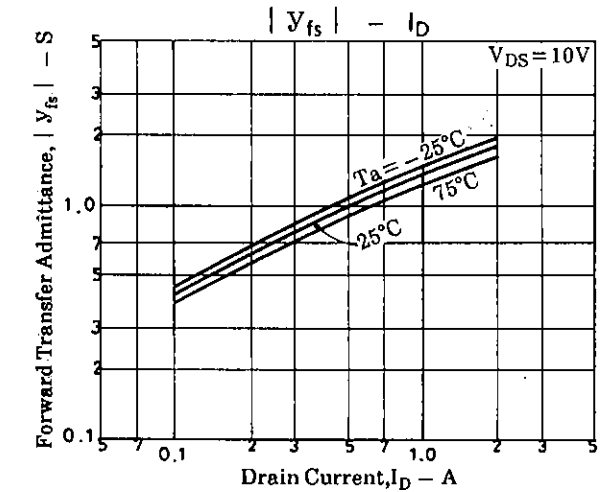
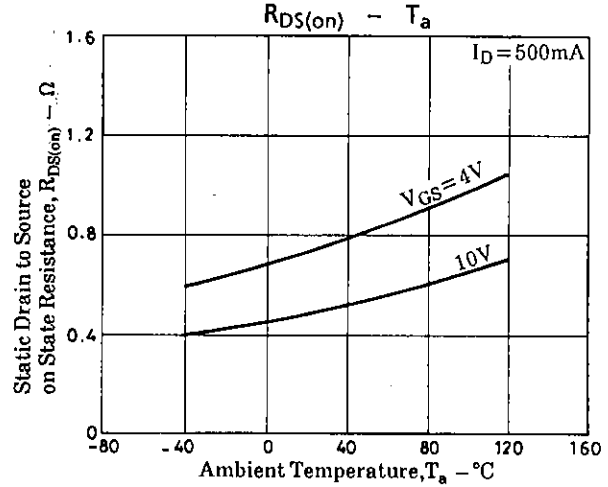
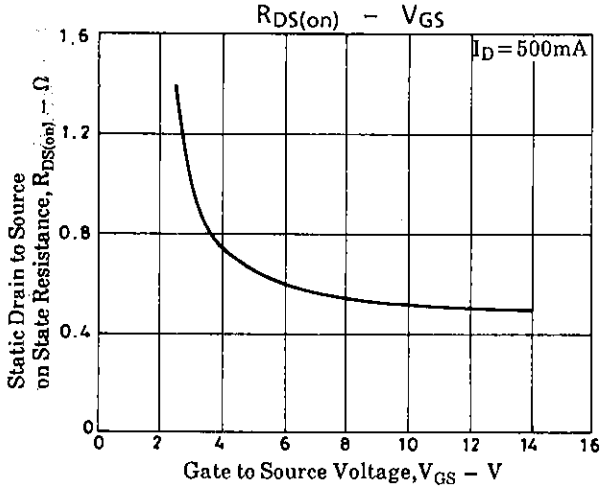
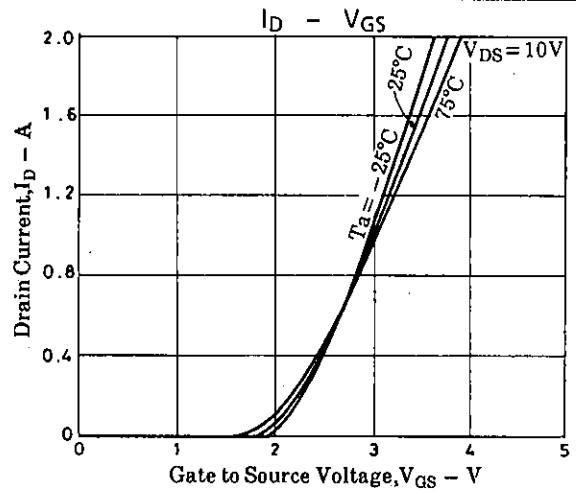
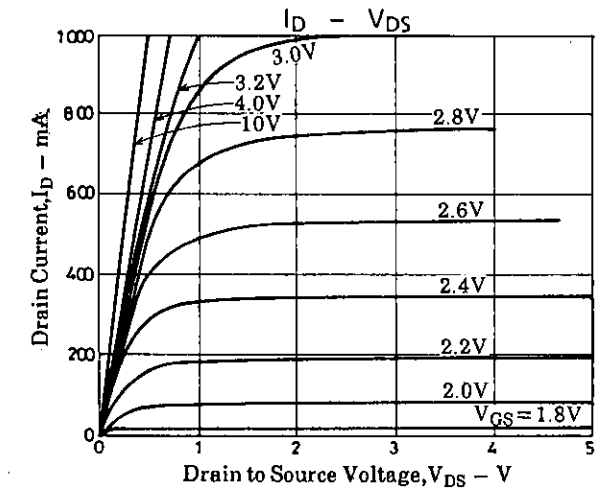
**Package Dimensions 2087**

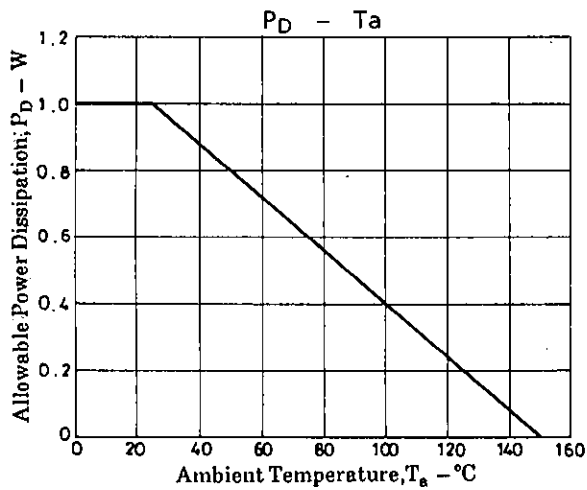
(unit: mm)



S: Source  
D: Drain  
G: Gate

SANYO: NMP





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