SANYO

No.3830

2SK1735

N-Channel MOS Silicon FET

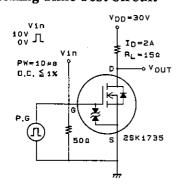
Very High-Speed Switching Applications

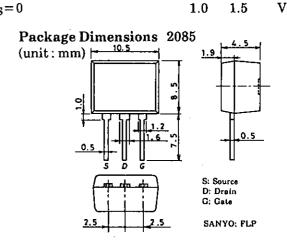
## **Features**

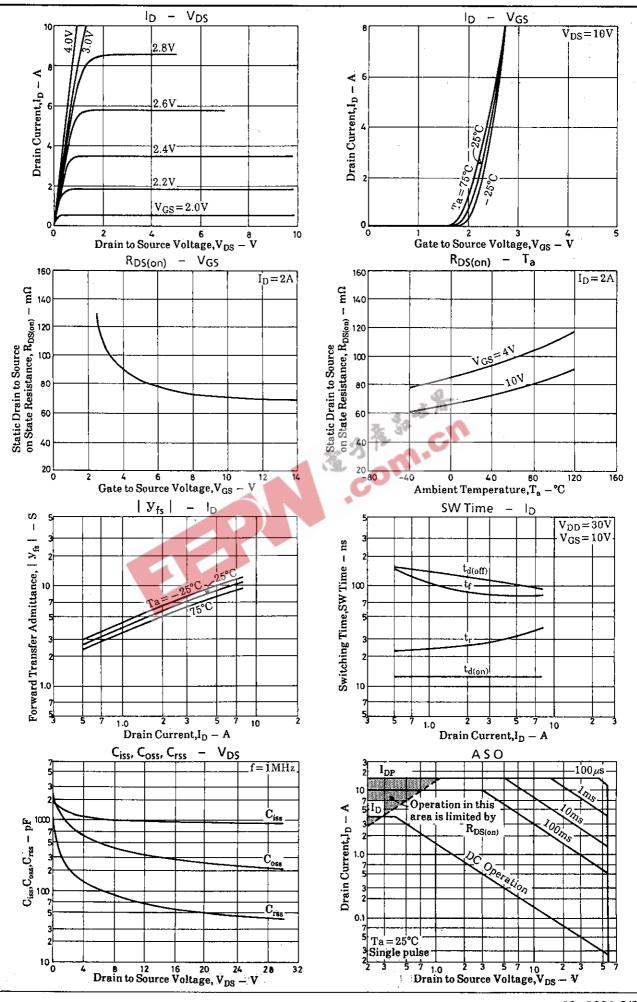
- $\cdot$  Low ON resistance.
- · Very high-speed switching.
- · Low-voltage drive.
- · Its height onboard is 9.5mm.
- · Meets radial taping.

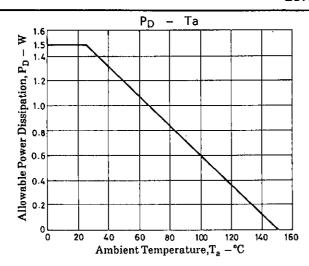
Absolute Maximum Ratings at Ta = 25°C					unit	
Drain to Source Voltage	$V_{DSS}$			60	V	
Gate to Source Voltage	$V_{GSS}$		:	± 15	V	
Drain Current(DC)	$I_{\mathbf{D}}$			4	Α	
Drain Current(Pulse)	$I_{DP}$	$PW \le 10 \mu s$ , duty cycle $\le 1\%$		16	Α	
Allowable Power Dissipation	$P_{D}$	. ,		1.5	W	
Channel Temperature	Tch	2_		150	$^{\circ}\mathrm{C}$	
Storage Temperature	Tstg	4. 35. 73.	55 to +	150	$^{\circ}\mathrm{C}$	
	_	7: 34				
Electrical Characteristics at Ta=	25°C	$I_{D} = 1 \text{ mA}, V_{GS} = 0$ $I_{D} = \frac{1}{100} \text{ mA}, V_{DS} = 0$	min	typ	max	unit
D-S Breakdown Voltage	V <sub>(BR)DSS</sub>	$I_D = 1 \text{ mA}, V_{GS} = 0$	60			V
G-S Breakdown Voltage	$V_{(BR)GSS}$	$I_{G} = \pm 100 \mu A, V_{DS} = 0$	$\pm 15$			V
Zero Gate Voltage		$V_{DS} = 60V, V_{GS} = 0$			100	$\mu A$
Drain Current						
Gate to Source Leakage Current	$\cdot I_{ ext{GSS}}$	$V_{GS} = \pm 12 V, V_{DS} = 0$			±10	$\mu$ A
Cutoff Voltage	V <sub>GS(off)</sub>	$V_{DS} = 10V, I_D = 1mA$	1.0		2.0	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 10V, I_D = 2A$	3.5	5.5		S
Static Drain to Source	R <sub>DS(on)</sub>	$I_D = 2A, V_{GS} = 10V$		70	90	$\mathbf{m}\Omega$
on State Resistance	RDS(on)	$I_D = 2A, V_{GS} = 4V$		90	120	$\mathbf{m}\Omega$
Input Capacitance	$C_{iss}$	$V_{DS} = 20V, f = 1MHz$		950		$\mathbf{pF}$
Output Capacitance	$C_{oss}$	$V_{DS} = 20V, f = 1MHz$	•	250		рF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = 20V, f = 1MHz$		50		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		13	*	ns
Rise Time	$\mathbf{t_r}$	"		25		ns
Turn-OFF Delay Time	$t_{d(off)}$	"		120		ns
Fall Time	$\mathbf{t_f}$	"		90		ns
Diode Forward Voltage	$v_{sd}$	$I_{S}=4A,V_{GS}=0$		1.0	1.5	V

## Switching Time Test Circuit











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