

No.3829

N-Channel MOS Silicon FET

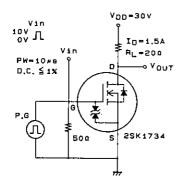
Very High-Speed Switching Applications

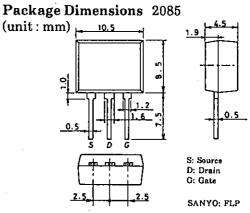
Features

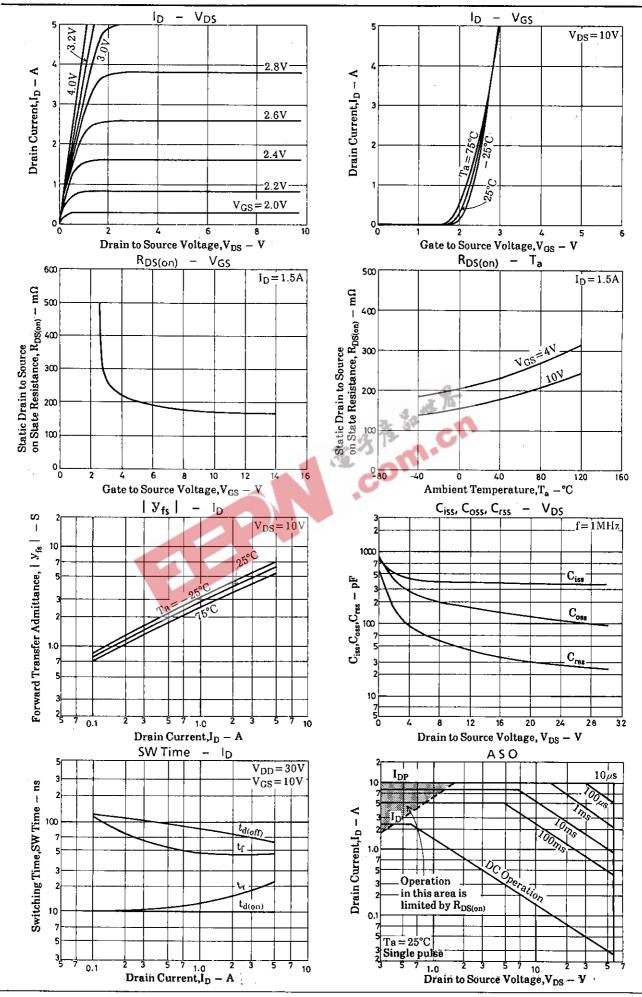
- · Low ON resistance.
- · Very high-speed switching.
- · Low-voltage drive.
- · Its height onboard is 9.5mm.
- · Meets radial taping.

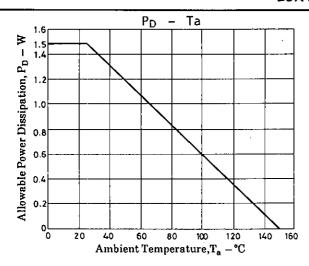
Absolute Maximum Ratings at Ta = 25°C					unit	
Drain to Source Voltage	V_{DSS}			60	V	
Gate to Source Voltage	V_{GSS}^{-33}		;	± 15	v	
Drain Current(DC)	ID			2.5	Α	
Drain Current(Pulse)	I_{DP}	PW≦10µs, duty cycle≦1%		10	A	
Allowable Power Dissipation	P_{D}			1.5	W	
Channel Temperature	Tch	49		150	°C	
Storage Temperature	Tstg	JE 765_	55 to +		°C	
•	Ü	7. 33				
Electrical Characteristics at Ta=	25°C	$I_{D}=1\text{mA}, V_{GS}=0$	min	typ	max	unit
D-S Breakdown Voltage	V _{(BR)DSS}	$I_D = 1 \text{mA}, V_{GS} = 0$	60	- J F		V
G-S Breakdown Voltage	V _{(BR)GSS}	$I_{G} = \pm 100 \mu A, V_{DS} = 0$	± 15			v
Zero Gate Voltage	IDSS	$V_{DS} = 60 \text{ V}, V_{GS} = 0$			100	μA
Drain Current	200	25				,
Gate to Source Leakage Current	I_{GSS}	$V_{GS} = \pm 12V, V_{DS} = 0$			±10	$\mu {\sf A}$
Cutoff Voltage	V _{GS(off)}	$V_{DS} = 10V_{AD} = 1mA$	1.0		2.0	v
Forward Transfer Admittance	$ \mathbf{y}_{\mathrm{fs}} $	$V_{DS} = 10V, I_{D} = 1.5A$	2	3.5		S
Static Drain to Source	R _{DS(on)}	$I_D = 1.5A, V_{GS} = 10V$		0.17	0.22	$\tilde{\Omega}$
on State Resistance	R _{DS(on)}	$I_D = 1.5 A, V_{GS} = 4 V$		0.22	0.29	Ω
Input Capacitance	Ciss	$V_{DS} = 20V, f = 1MHz$		380		рF
Output Capacitance	Coss	$V_{DS} = 20V, f = 1MHz$		120		pF
Reverse Transfer Capacitance	Crss	$V_{DS} = 20V, f = 1MHz$		30		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		10		ns
Rise Time	t_r	• "		15		ns
Turn-OFF Delay Time	$\mathbf{t_{d(off)}}$	11		80		ns
Fall Time	t_f	"		45		ns
Diode Forward Voltage	$\hat{ m V}_{ m SD}$	$I_S = 2.5A, V_{GS} = 0$		1.0	1.5	V
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Switching Time Test Circuit











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