

No.3812

2SJ227 P-Channel MOS Silicon FET Very High-Speed Switching Applications

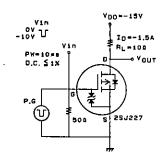
## **Features**

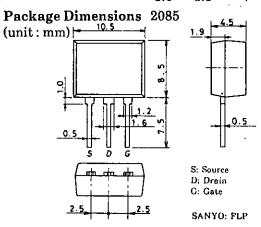
- · Low ON resistance.
- · Very high-speed switching.
- · Low-voltage drive.
- · Its height onboard is 9.5mm.
- · Meets radial taping.

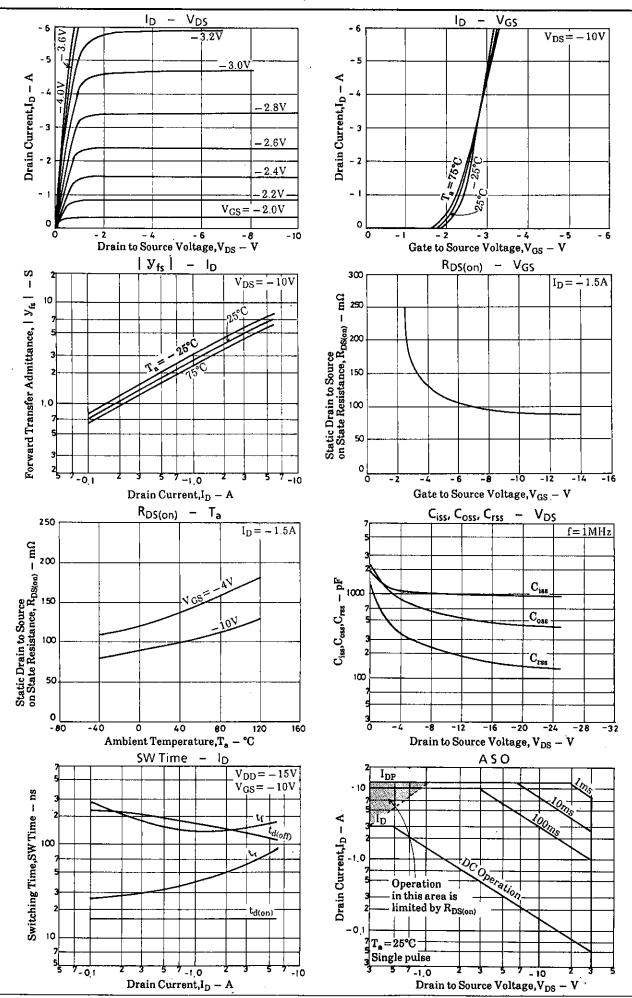
Absolute Maximum Ratings at		unit		
Drain to Source Voltage	$\rm v_{ m DSS}$		-30	V
Gate to Source Voltage	$V_{GSS}$		$\pm 15$	V
Drain Current(DC)	$I_{D}$		-3	Α
Drain Current(Pulse)	$I_{\mathrm{DP}}^{-}$	$PW \le 10 \mu s$ , duty cycle $\le 1\%$	-12	Α
Allowable Power Dissipation	$\mathbf{P_{D}}$		1.5	W
Channel Temperature	Tch		150	$^{\circ}\mathrm{C}$
Storage Temperature	Tstg		-55  to  +150	°C

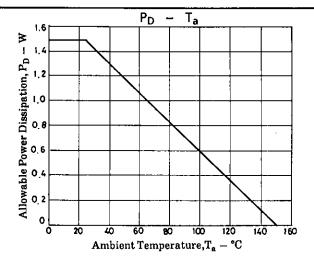
Electrical Characteristics at Ta = D-S Breakdown Voltage G-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = -1 \text{ mA}, V_{GS} = 0$ $I_G = \pm 100 \mu \text{A}, V_{DS} = 0$	min - 30 ± 15	typ	max	unit V V
Zero Gate Voltage	I <sub>DSS</sub>	$V_{DS} = -30V, V_{GS} = 0$			-100	$\mu$ A
Drain Current Gate to Source Leakage Current	$I_{GSS}$	$V_{GS} = \pm 12V_1 V_{DS} = 0$			±10	$\mu$ A
Cutoff Voltage	V <sub>GS(off)</sub>	$V_{DS} = -10V, I_{D} = -1mA$	-1.0		-2.0	v
Forward Transfer Admittance	$ \mathbf{y}_{\mathbf{fs}} $	$V_{DS} = -10V, I_D = -1.5A$	2	3.5		S
Static Drain to Source	$R_{DS(on)}$	$I_D = -1.5A, V_{GS} = -10V$		95	130	$\mathbf{m}\Omega$
on State Resistance	$R_{DS(on)}$	$I_D = -1.5A, V_{GS} = -4V$		130	170	${f m}\Omega$
Input Capacitance	$C_{iss}$	$V_{DS} = -10V, f = 1MHz$		1000		рF
Output Capacitance	$C_{oss}$	$V_{DS} = -10V, f = 1MHz$		600		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = -10V, f = 1MHz$		220		рF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		15		ns
Rise Time	$\mathbf{t_r}$	"		45		ns
Turn-OFF Delay Time	$t_{d(off)}$	"		160		ns
Fall Time	$t_f$	"		145		ns
Diode Forward Voltage	$V_{SD}$	$I_S = -3A, V_{GS} = 0$		-1.0	-1.5	V

Switching Time Test Circuit









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