Ordering number : EN5305A

P-Channel Silicon MOSFET

FW103

Ultrahigh-Speed Switching Applications

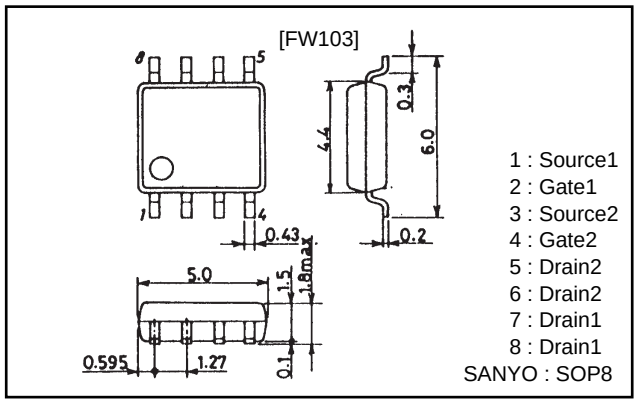
Features

- Low ON resistance
- Ultrahigh-speed switching.
- Composite type with two 4V-drive P-channel MOSFETs facilitating high-density mounting.
- Matched pair capability.

Package Dimensions

unit: mm

2129-SOP8



Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		–30	V
Gate-to-Source Voltage	V_{GSS}		±20	V
Drain Current (DC)	I_D		–3	A
Drain Current (pulse)	I_{DP}	PW≤10μs, duty cycle≤1%	–32	A
Allowable Power Dissipation	P_D	Mounted on a ceramic board (1000mm^2×0.8mm) 1unit	1.7	W
Total Dissipation	P_T	Mounted on a ceramic board (1000mm^2×0.8mm)	2.0	W
Channel Temperature	Tch		150	°C
Storage temperature	Tstg		–55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
D-S Breakdown Voltage	$V_{(BR)DSS}$	I_D=–1mA, V_{GS}=0	–30			V
Zero-Gate-Voltage Drain Current	I_{DSS}	V_{DS}=–30V, V_{GS}=0			–100	μA
Gate-to-Source Leakage Current	I_{GSS}	V_{GS}=±16V, V_{DS}=0			±10	μA
Cutoff Voltage	$V_{GS(off)}$	V_{DS}=–10V, I_D=–1mA	–1.0		–2.5	V
Forward Transfer Admittance	$\|y_{fs}\|$	V_{DS}=–10V, I_D=–3A	2	4		S
Static Drain-to-Source ON-State Resistance	$R_{DS(on)}$	I_D=–3A, V_{GS}=–10V		95	125	mΩ
	$R_{DS(on)}$	I_D=–3A, V_{GS}=–4V		150	205	mΩ
Input Capacitance	Ciss	V_{DS}=–10V, f=1MHz		550		pF
Output Capacitance	Coss	V_{DS}=–10V, f=1MHz		370		pF
Reverse Transfer Capacitance	Crss	V_{DS}=–10V, f=1MHz		70		pF

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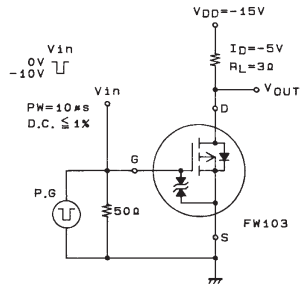
Continued from preceding page.

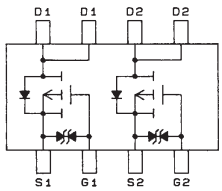
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		20		ns
Rise Time	t_r	″		110		ns
Turn-OFF Delay Time	$t_{d(off)}$	″		330		ns
Fall Time	t_f	″		170		ns
Diode Forward Voltage	V_{SD}	I_S=–3A, V_{GS}=0		–1.0	–1.2	V

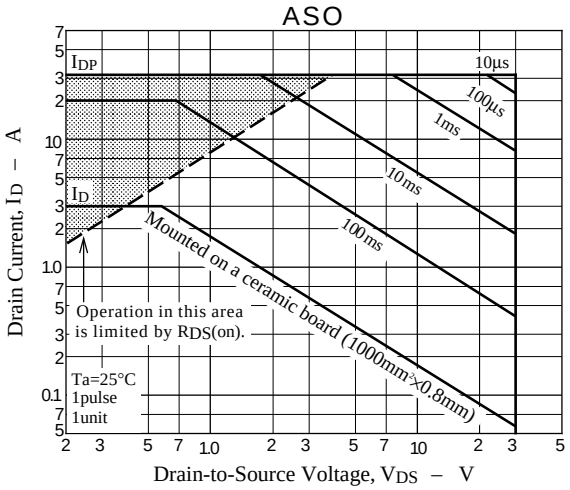
Switching Time Test Circuit

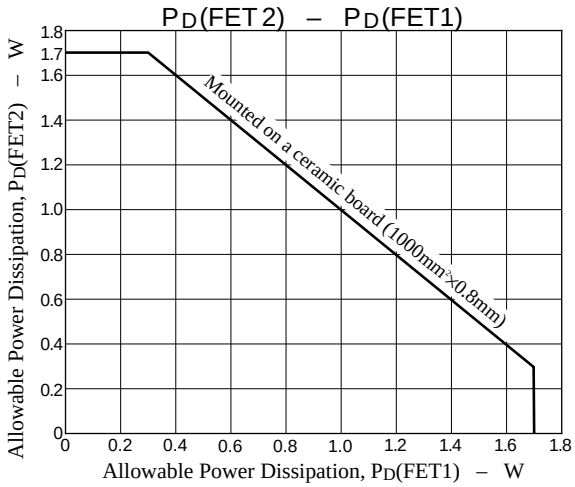


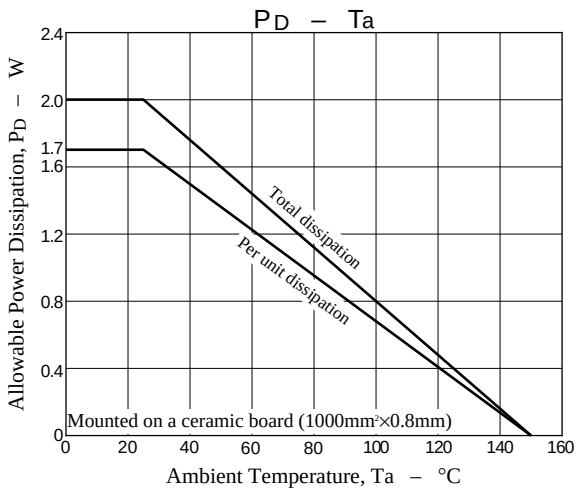
Electrical Connection

(Top view)









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