



FW306

N- Channel Silicon MOS FET
High Speed Switching

TENTATIVE

Features

- High density mounting is possible because of the complex type which holds low-on-resistance, very-high-speed-switching and 4-volt-drive N- / P- channel / MOSFETs.
- Low ON-state resistance.

Absolute Maximum Ratings / Ta=25°C

		N-channel	P-channel	unit
Drain to Source Voltage	VDSS	30	30	V
Gate to Source Voltage	VGSS	±25	±25	V
Drain Current(DC)	ID	5	-3	A
Drain Current(Pulse)	IDP	PW≤10μS, dutycycle≤1%		A
Allowable power Dissipation	PD		1.7	W
		Mounted on ceramic board (1000mm ² × 0.8mm) 1unit		
Total Dissipation	PT		2.0	W
		Mounted on ceramic board (1000mm ² × 0.8mm)		
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to ±150	°C

Electrical Characteristics / Ta=25°C

(N-channel)

			min	typ	max	unit
Drain to Source Breakdown Voltage	V(BR)DSS	ID=1mA , VGS=0	30			V
Zero Gate Voltage Drain Current	IDSS	VDS=30V , VGS=0			100	μA
Gate to Source Leakage Current	IGSS	VGS=±20V , VDS=0			±10	μA
Cutoff Voltage	VGS(off)	VDS=10V , ID=1mA	1.0		2.5	V
Forward Transfer Admittance	yfs	VDS=10V , ID=5A	5	8		S
Static Drain to Source On State Resistance	RDS(on) 1	ID=5A , VGS=10V		50	65	mΩ
	RDS(on) 2	ID=2A , VGS=4V		84	120	mΩ
Input Capacitance	Ciss	VDS=10V , f=1MHz		460		pF
Output Capacitance	Coss	VDS=10V , f=1MHz		340		pF
Reverse Transfer Capacitance	Crss	VDS=10V , f=1MHz		85		pF
Turn-ON Delay Time	td(on)	See Specified Test Circuit		13		ns
Rise Time	tr			300		ns
Turn-OFF Delay Time	td(off)			30		ns
Fall Time	tf			50		ns
Diode Forward Voltage	VSD	IS=5A , VGS = 0		1.0	1.2	V

(P-channel)

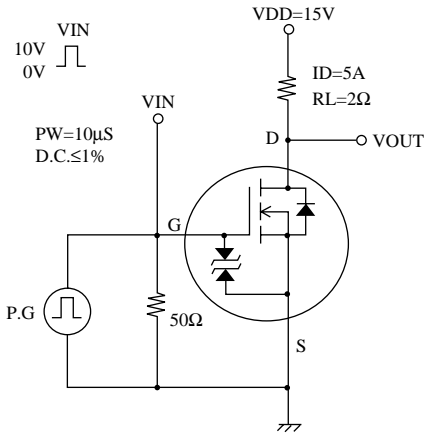
			min	typ	max	unit
Drain to Source Breakdown Voltage	V(BR)DSS	ID=-1mA , VGS=0	-30			V
Zero Gate Voltage Drain Current	IDSS	VDS=-30V , VGS=0			-100	μA
Gate to Source Leakage Current	IGSS	VGS=±20V , VDS=0			±10	μA
Cutoff Voltage	VGS(off)	VDS=-10V , ID=-1mA	-1.0		-2.5	V
Forward Transfer Admittance	yfs	VDS=-10V , ID=-3A	3	5		S
Static Drain to Source On State Resistance	RDS(on) 1	ID=-3A , VGS=-10V		110	160	mΩ
	RDS(on) 2	ID=-2A , VGS=-4V		200	320	mΩ
Input Capacitance	Ciss	VDS=-10V , f=1MHz		460		pF
Output Capacitance	Coss	VDS=-10V , f=1MHz		350		pF
Reverse Transfer Capacitance	Crss	VDS=-10V , f=1MHz		80		pF
Turn-ON Delay Time	td(on)	See Specified Test Circuit		13		ns
Rise Time	tr			150		ns
Turn-OFF Delay Time	td(off)			30		ns
Fall Time	tf			50		ns
Diode Forward Voltage	VSD	IS=-3A , VGS = 0	-1.0		-1.2	V

Specifications and information herein are subject to change without notice.

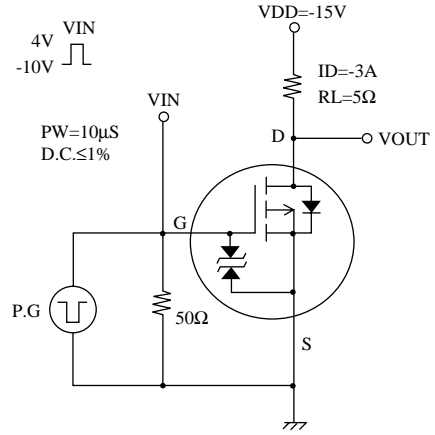


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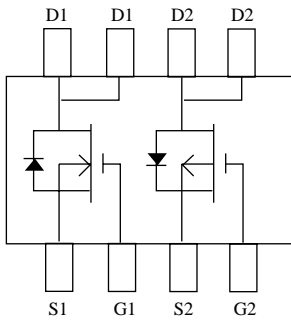
Switching Time Test Circuit
(N-channel)



Switching Time Test Circuit
(P-channel)



Electrical Connection
(Top View)



Case Outline
SOP8(unit:mm)

