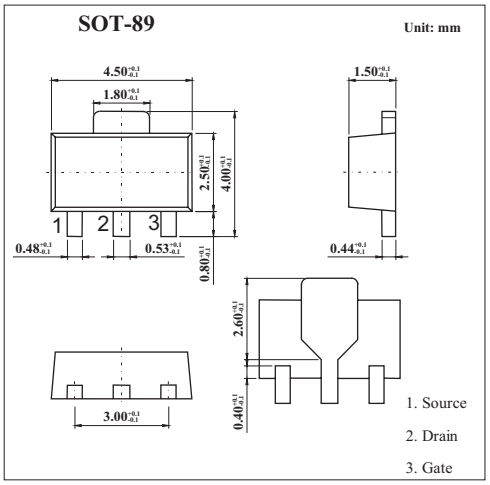
250V P-Channel Enhancement Mode Vertical MOSFET
KVP4424Z

Features

- 240 Volt V_{DS}
- $R_{DS(on)}$= 8.8Ω typical at V_{GS}=-3.5V
- Low threshold and Fast switching



Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-240	V
Continuous Drain Current at T_{amb}=25℃	I_D	-200	mA
Pulsed Drain Current	I_{DM}	-1	A
Gate Source Voltage	V_{GS}	± 40	V
Power Dissipation at T_{amb} =25℃	P_{tot}	1*	W
Operating and Storage Temperature Range	T_j:T_{stg}	-55 to +150	℃

* recommended Ptot calculated using FR4 measuring 15X15X0.6mm

KVP4424Z

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	B_{VDSS}	I_D=-1mA, V_{GS}=0V	-240			V
Gate-Source Threshold Voltage	$V_{GS(th)}$	I_D=-1mA, V_{DS}= V_{GS}	-0.7	-1.4	-2.0	V
Gate-Body Leakage	I_{GSS}	V_{GS}=± 40V, V_{DS}=0V			100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-240V, V_{GS}=0V			-10	μA
		V_{DS}=-190V, V_{GS}=0V, T=125℃			-100	μA
On-State Drain Current	$I_{D(on)}$	V_{DS}=-10V, V_{GS}=-10V	-0.75	-1.0		A
Static Drain-Source	$R_{DS(on)}$	V_{GS}=-10V, I_D=-200mA		7.1	9	Ω
On-State Resistance		V_{GS}=-3.5V, I_D=-100mA		8.8	11	Ω
Forward Transconductance *1,2	g_{fs}	V_{DS}=-10V,I_D=-0.2A	125			mS
Input Capacitance *2	C_{iss}	V_{DS}=-25V, V_{GS}=0V, f=1MHz		100	200	pF
Common Source Output Capacitance *2	C_{oss}			18	25	pF
Reverse Transfer Capacitance*2	C_{rss}			5	15	pF
Turn-On Delay Time *2,3	$t_{d(on)}$	V_{DD} ≈-50V, I_D =-0.25A,V_{GEN}=-10V		8	15	ns
Rise Time *2,3	t_r			8	15	ns
Turn-Off Delay Time *2,3	$t_{d(off)}$			26	40	ns
Fall Time *2,3	t_f			20	30	ns

*1 Measured under pulsed conditions. Width=300μs. Duty cycle ≤2%

*2 Sample test.

*3 Switching times measured with 50Ω source impedance and ＜5ns rise time on a pulse generator

Spice parameter data is available upon request for this device

■ Marking

Marking	24P