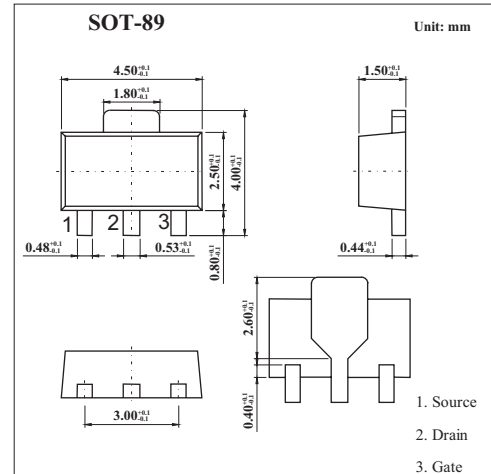## 250V P-Channel Enhancement Mode Vertical MOSFET
KVP4424Z

■ Features

● 240 Volt V_{DS}

● $R_{DS(on)}$= 8.8 Ω typical at V_{GS}=-3.5V

● Low threshold and Fast switching

SOT-89   Unit: mm

1. Source
2. Drain
3. Gate

■ 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}	$\pm$ 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	μ A
		V$_{DS}$=-190V, V$_{GS}$=0V, T=125℃			-100	μ A
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=300 μ s. Duty cycle ≤2%

*2 Sample test.

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

  Spice parameter data is available upon request for this device

■ Marking

Marking	24P