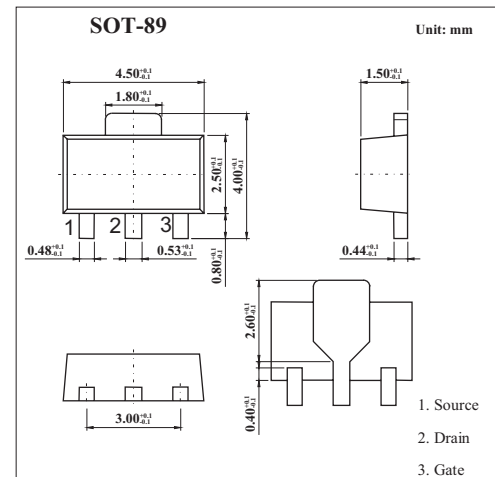


250V N-Channel Enhancement Mode Vertical MOSFET KVN4424Z

■ Features

- 240 Volt V_{DS}
- Extremely low $R_{DS(on)}=4.3\ \Omega$
- Low threshold and Fast switching



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	240	V
Continuous Drain Current at $T_{amb}=25^\circ\text{C}$	I_D	300	mA
Pulsed Drain Current	I_{DM}	1	A
Gate Source Voltage	V_{GS}	± 40	V
Power Dissipation at $T_{amb}=25^\circ\text{C}$	P_{tot}	1*	W
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	$^\circ\text{C}$

* recommended P_{tot} calculated using FR4 measuring 15X15X0.6mm

Refer to the handling instructions for soldering surface mount components.

KVN4424Z

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BVDSS	Id=1mA, VGS=0V	240			V
Gate-Source Threshold Voltage	VGS(th)	Id=1mA, VDS= VGS	0.8	1.3	1.8	V
Gate-Body Leakage	IGSS	VGS=± 40V, VDS=0V			100	nA
On State Drain-Current	ID(on)	VDS=10V, VGS=10V	0.8	1.4		A
Zero Gate Voltage Drain Current	IDSS	VDS=240 V, VGS=0V			10	μA
Current		VDS=190 V, VGS=0V, T=125°C			100	μA
Static Drain-Source	RDS(on)	VGS=10V, Id=500mA		4	5.5	Ω
On-State Resistance		VGS=2.5V, Id=100mA		4.3	6	Ω
Forward Transconductance *1,2	gfs	VDS=10V, Id=0.5A	0.4	0.75		S
Input Capacitance *2	Ciss	VDS=25V, VGS=0V, f=1MHz		110	200	pF
Common Source Output Capacitance *2	Coss			15	25	pF
Reverse Transfer Capacitance *2	Crss			3.5	15	pF
Turn-On Delay Time *2,3	td(on)	VDD ≈50V, ID =0.25A, VGEN=10V		2.5	5	ns
Rise Time *2,3	tr			5	8	ns
Turn-Off Delay Time *2,3	td(off)			40	60	ns
Fall Time *2,3	tf			16	25	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	N24
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