VN2406L

Preferred Device

Small Signal MOSFET 200 mAmps, 240 Volts

N–Channel TO–92

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Drain–Source Voltage	V_{DSS}	240	Vdc
Drain–Gate Voltage	V_{DGR}	240	Vdc
Gate–Source Voltage – Continuous – Non–repetitive ($t_p \leq 50$ μs)	 V_{GS} V_{GSM}	 ± 20 ± 40	 Vdc Vpk
Continuous Drain Current	I_D	200	mAdc
Pulsed Drain Current	I_{DM}	500	mAdc
Power Dissipation @ $T_C = 25°C$ Derate above 25°C	P_D	350 2.8	mW mW/°C
Operating and Storage Temperature	T_J, T_{stg}	–	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	312.5	°C/W
Maximum Lead Temperature for Soldering Purposes, 1/16″ from case for 10 seconds	T_L	300	°C

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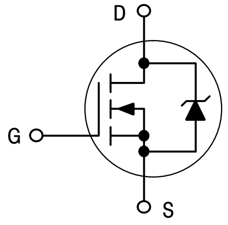
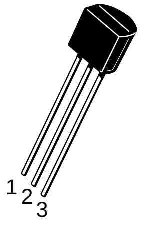
200 mAMPS
240 VOLTS
$R_{DS(on)} = 6\ \Omega$

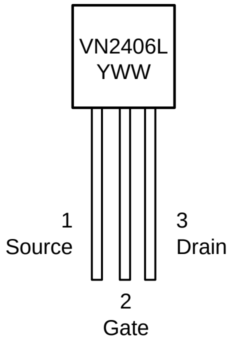
N–Channel





TO–92
CASE 29
Style 22

MARKING DIAGRAM & PIN ASSIGNMENT



Y = Year
WW = Work Week

ORDERING INFORMATION

Device	Package	Shipping
VN2406L	TO–92	1000 Units/Box
VN2406LZL1	TO–92	2000 Ammo Pack

Preferred devices are recommended choices for future use and best overall value.

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
STATIC CHARACTERISTICS				
Drain–Source Breakdown Voltage (V_{GS} = 0, I_D = 100 μA)	$V_{(BR)DSS}$	240	–	Vdc
Zero Gate Voltage Drain Current (V_{DS} = 120 Vdc, V_{GS} = 0) (V_{DS} = 120 Vdc, V_{GS} = 0, T_A = 125°C)	I_{DSS}	 – –	 10 500	μAdc
Gate– Body Leakage (V_{DS} = 0, V_{GS} = ±15 V)	I_{GSS}	–	±100	nAdc
Gate Threshold Voltage (V_{DS} = V_{GS}, I_D = 1.0 mA)	$V_{GS(th)}$	0.8	2.0	Vdc
On–State Drain Current (Note 1) (V_{GS} = 10 V, $V_{DS} \geq 2.0\ V_{DS(on)}$)	$I_{D(on)}$	1.0	–	Adc
Drain–Source On Resistance (Note 1) (V_{GS} = 2.5 V, I_D = 0.1 A) (V_{GS} = 10 V, I_D = 0.5 A)	$r_{DS(on)}$	 – –	 10 6.0	Ω
Forward Transconductance (Note 1) (V_{DS} = 10 V, I_D = 0.5 A)	g_{fs}	300	–	mS

DYNAMIC CHARACTERISTICS

Input Capacitance	(V_{DS} = 25 Vdc, V_{GS} = 0, f = 1.0 MHz)	C_{iss}	–	125	pF
Output Capacitance		C_{oss}	–	50	pF
Reverse Transfer Capacitance		C_{rss}	–	20	pF

SWITCHING CHARACTERISTICS

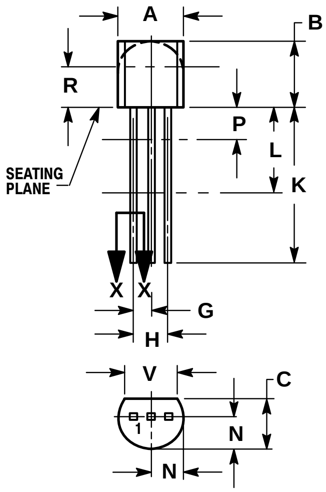
Turn–On Time	(V_{DD} = 60 Vdc, I_D = 0.4 A, R_L = 150 Ω, R_G = 25 Ω)	$t_{(on)}$	–	8.0	ns
		$t_{(r)}$	–	8.0	ns
Turn–Off Time		$t_{(off)}$	–	23	ns
		$t_{(f)}$	–	34	ns

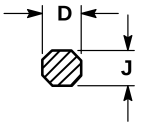
1. Pulse Test; Pulse Width < 300 μs, Duty Cycle ≤ 2.0%.

PACKAGE DIMENSIONS

TO–92

CASE 29–11
ISSUE AL





SECTION X–X

NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. CONTOUR OF PACKAGE BEYOND DIMENSION R IS UNCONTROLLED.
4. LEAD DIMENSION IS UNCONTROLLED IN P AND BEYOND DIMENSION K MINIMUM.

	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
A	0.175	0.205	4.45	5.20
B	0.170	0.210	4.32	5.33
C	0.125	0.165	3.18	4.19
D	0.016	0.021	0.407	0.533
G	0.045	0.055	1.15	1.39
H	0.095	0.105	2.42	2.66
J	0.015	0.020	0.39	0.50
K	0.500	---	12.70	---
L	0.250	---	6.35	---
N	0.080	0.105	2.04	2.66
P	---	0.100	---	2.54
R	0.115	---	2.93	---
V	0.135	---	3.43	---

STYLE 22:
PIN 1. SOURCE
2. GATE
3. DRAIN

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