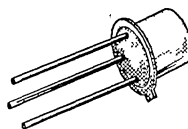


PRODUCT SUMMARY

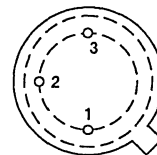
PART NUMBER	$V_{(BR)DSS}$ (V)	$r_{DS(ON)}$ (Ω)	I_D (A)	PACKAGE
VN2406B	240	6	0.63	TO-205AD
VN2406D	240	6	1.12	TO-220

Performance Curves: VNDB24 (See Section 7)

TO-205AD (TO-39)

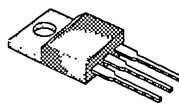


BOTTOM VIEW

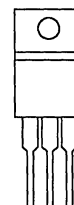


- 1 SOURCE
- 2 GATE
- 3 DRAIN & CASE

TO-220



FRONT VIEW



- 1 GATE
- 2 & TAB - DRAIN
- 3 SOURCE

ABSOLUTE MAXIMUM RATINGS ($T_C = 25^\circ\text{C}$ unless otherwise noted)

PARAMETERS/TEST CONDITIONS	SYMBOL	VN2406B	VN2406D	UNITS
Drain-Source Voltage	V_{DS}	240	240	V
Gate-Source Voltage	V_{GS}	± 20	± 30	
Continuous Drain Current	I_D	$T_C = 25^\circ\text{C}$	0.63	A
		$T_C = 100^\circ\text{C}$	0.4	
Pulsed Drain Current ¹	I_{DM}	3	3	
Power Dissipation	P_D	$T_C = 25^\circ\text{C}$	6.25	W
		$T_C = 100^\circ\text{C}$	2.5	
Operating Junction and Storage Temperature	T_j, T_{stg}	-55 to 150		$^\circ\text{C}$
Lead Temperature (1/16" from case for 10 seconds)	T_L	300		

THERMAL RESISTANCE

THERMAL RESISTANCE	SYMBOL	VN2406B	VN2406D	UNITS
Junction-to-Case	R_{thJC}	20	6.25	$^\circ\text{C/W}$

¹Pulse width limited by maximum junction temperature

ELECTRICAL CHARACTERISTICS ¹				LIMITS		
PARAMETER	SYMBOL	TEST CONDITIONS	TYP ²	VN2406		UNIT
				MIN	MAX	
STATIC						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0\text{ V}, I_D = 100\ \mu\text{A}$	270	240		V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 1\text{ mA}$	1.4	0.8	2.0	
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0\text{ V}$ $V_{GS} = \pm 15\text{ V}$ $T_C = 125^\circ\text{C}$	± 1		± 100	nA
			± 5		± 500	
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 120\text{ V}$ $V_{GS} = 0\text{ V}$ $T_C = 125^\circ\text{C}$	0.01		10	μA
			1		500	
On-State Drain Current ³	$I_{D(ON)}$	$V_{DS} = 10\text{ V}, V_{GS} = 10\text{ V}$	1.5	1		A
Drain-Source On-Resistance ³	$r_{DS(ON)}$	$V_{GS} = 2.5\text{ V}, I_D = 0.1\text{ A}$ $V_{GS} = 10\text{ V}$ $I_D = 0.5\text{ V}$ $T_C = 125^\circ\text{C}$	7.5		10	Ω
			5		6	
			10.8		14.8	
Forward Transconductance ³	g_{FS}	$V_{DS} = 10\text{ V}, I_D = 0.5\text{ A}$	530	300		mS
Common Source Output Conductance ³	g_{OS}	$V_{DS} = 7.5\text{ V}, I_D = 0.5\text{ A}$	475			μS
DYNAMIC						
Input Capacitance	C_{iss}	$V_{DS} = 25\text{ V}$ $V_{GS} = 0\text{ V}$ $f = 1\text{ MHz}$	110		125	pF
Output Capacitance	C_{oss}		30		50	
Reverse Transfer Capacitance	C_{rss}		5		20	
SWITCHING						
Turn-On Time	$t_{d(ON)}$	$V_{DD} = 60\text{ V}, R_L = 150\ \Omega$ $I_D = 0.4\text{ A}, V_{GEN} = 10\text{ V}$ $R_G = 25\ \Omega$ (Switching time is essentially independent of operating temperature)	3		8	ns
	t_r		2		8	
Turn-Off Time	$t_{d(OFF)}$		13		17	
	t_f		9		12	

- NOTES: 1. $T_C = 25^\circ\text{C}$ unless otherwise noted.
 2. For design aid only, not subject to production testing.
 3. Pulse test; $PW = 300\ \mu\text{s}$, duty cycle $\leq 2\%$