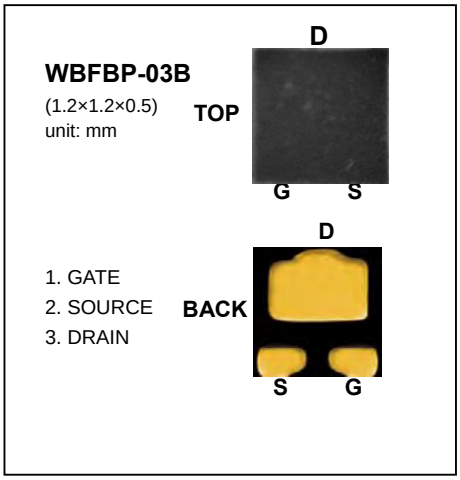
RoHS COMPLIANT

WBFBP-03B Plastic-Encapsulate MOSFETS

M7002NND03

MOSFET(N-Channel)



DESCRIPTION

High cell density, DMOS technology. These products have been designed to minimize on-state resistance while provide rugged, reliable, and fast switching performance. They can be used in most applications requiring up to 400mA DC and can deliver pulsed currents up to 2A. These products are particularly suited for low voltage, low current applications such as small servo motor control, power MOSFET gate drivers, and other switching applications.

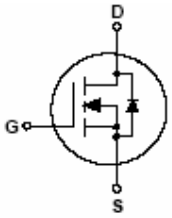
FEATURES

High density cell design for low $R_{DS(ON)}$

Voltage controlled small signal switch

Rugged and reliable

High saturation current capability

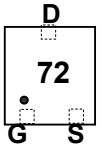


APPLICATION

N-Channel Enhancement Mode Field Effect Transistor

For portable equipment:(i.e. Mobile phone,MP3, MD,CD-ROM, DVD-ROM, Note book PC, etc.)

MARKING: 72



MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{DS}	Drain-Source Voltage	60	V
V_{GSS}	Gate-Source Voltage - Continuous	±20	V
I_D	Maximum Drain Current - Pulsed	115	mA
P_D	Power Dissipation	150	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	833	℃/W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~+150	℃

RoHS COMPLIANT

WBFBP-03B Plastic-Encapsulate MOSFETS

M7002NND03

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS}=0V,I_D=10μA	60			V
Gate-Threshold Voltage*	$V_{th(GS)}$	V_{DS}=V_{GS}, I_D=250μA	1		2.5	
Gate-body Leakage	I_{GSS}	V_{DS}=0V, V_{GS}=±25V			±80	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=60V, V_{GS}=0V			0.08	μA
		V_{DS}=60V,V_{GS}=0V,T_j=125℃			500	
On-state Drain Current*	$I_{D(ON)}$	V_{GS}=10V, V_{DS}=7V	500			mA
Drain-Source On-Resistance*	$R_{DS(on)}$	V_{GS}=10V, I_D=500mA	1		7.5	Ω
		V_{GS}=5V, I_D=50mA	1		7.5	
Drain-Source On- Voltage *	$V_{DS(on)}$	V_{GS}=10V, I_D=500mA	0.5		3.75	V
		V_{GS}=5V, I_D=50mA	0.05		0.375	
Forward Tran conductance*	g_{fs}	V_{DS}=10V, I_D=200mA	80		500	ms
Diode Forward Voltage	V_{SD}	I_S=115mA, V_{GS}=0V	0.55		1.2	V
Input Capacitance	C_{iss}	V_{DS}=25V, V_{GS}=0V,f=1MHz			50	pF
Output Capacitance	C_{oss}				25	
Reverse Transfer Capacitance	C_{rss}				5	

*Pulse test : pulse width≤300μs, duty cycle≤2%.

SWITCHING TIME

Turn-on Time	$t_{d(on)}$	V_{DD}=25V,R_G=25Ω I_D=500mA,V_{GEN}=10V R_L=50Ω			20	ns
Turn-off Time	$t_{d(off)}$				40	