

2N7002DW

N-Channel MOSFET

SOT-363

Features

- Halogen free available upon request by adding suffix "-HF"
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Power Dissipation: 0.2W(Tamb=25°C)
- Drain Current: 115mA
- Drain-source Voltage: 60V
- Operating Junction Temperature: -55 to +150°C
- Storage Temperature: -55 to +150°C
- Marking: K72

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Typ	Max	Units
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage* ($V_{GS}=0Vdc, I_D=10\mu A$)	60	70	---	Vdc
$V_{th(GS)}$	Gate-Threshold Voltage* ($V_{DS}=V_{GS}, I_D=250\mu A$)	1.0	1.5	2.0	Vdc
I_{GSS}	Gate-body Leakage* ($V_{DS}=0Vdc, V_{GS}=\pm 20Vdc$)	---	---	± 10	nAdc
I_{DSS}	Zero Gate Voltage Drain Current* ($V_{DS}=60Vdc, V_{GS}=0Vdc$) ($V_{DS}=60Vdc, V_{GS}=0Vdc, T_J=125^\circ C$)	---	---	1 500	μA dc
$I_{D(ON)}$	On-state Drain Current* ($V_{DS}=7.5Vdc, V_{GS}=10Vdc$)	0.5	1.0	---	Adc
$r_{DS(on)}$	Drain-Source On-Resistance* ($V_{GS}=5Vdc, I_D=50mA$) ($V_{GS}=10Vdc, I_D=500mA$)	---	3.2 4.4	7.5 13.5	Ω
g_{FS}	Forward Transconductance* ($V_{DS}=10Vdc, I_D=200mA$)	80	---	---	ms
C_{iss}	Input Capacitance	---	22	50	pF
C_{oss}	Output Capacitance	---	11	25	
C_{rss}	Reverse Transfer Capacitance	---	2	5	

Switching

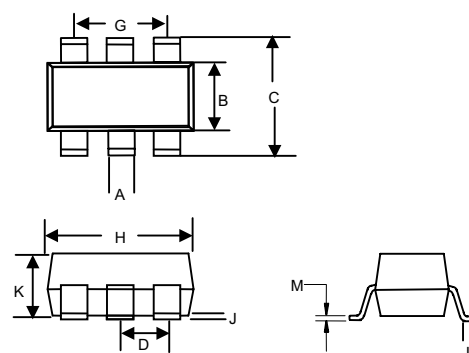
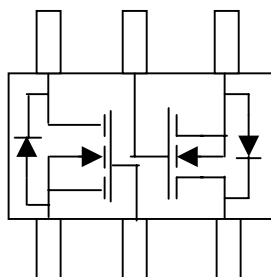
$t_{d(on)}$	Turn-on Time	$V_{DD}=30Vdc,$ $V_{GEN}=10Vdc$	---	7	20	ns
$t_{d(off)}$	Turn-off Time	$R_L=150\Omega, I_D=200mA,$ $R_G=25\Omega$	---	11	20	

Thermal

R_{thJA}	Thermal Resistance, Junction to Ambient **	625	$^{\circ}C/W$
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NOTE: *. Pulse test, pulse width $\leq 300 \mu s$, duty cycle $\leq 20\%$

** . Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch,
Minimum land pad size.



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.006	.014	0.15	0.35	
B	.045	.053	1.15	1.35	
C	.085	.096	2.15	2.45	
D	.026		0.65	Nominal	
G	.047	.055	1.20	1.40	
H	.071	.087	1.80	2.20	
J	---	.004	---	0.10	
K	.035	.043	0.90	1.10	
L	.010	.018	0.26	0.46	
M	.003	.006	0.08	0.15	

Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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