



Micro Commercial Components
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2N7002V

Features

- Dual N-Channel MOSFET
- Low On-Resistance
- Low Gate Threshold Voltage
- Low Input Capacitance
- Fast Switching Speed

Maximum Ratings @ 25°C Unless Otherwise Specified

Symbol	Rating	Rating	Unit
V _{DSS}	Drain-source Voltage	60	V
V _{DGR}	Drain-Gate Voltage	60	V
V _{GSS}	Gate-source Voltage	±20	V
I _D	Drain Current	280	mA
P _D	Total Power Dissipation	150	mW
R _{θJA}	Thermal Resistance Junction to Ambient	833	°C/W
T _J	Operating Junction Temperature	-55 to +150	°C
T _{STG}	Storage Temperature	-55 to +150	°C

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 =10μAdc)	60	70	---	Vdc
V _{th(GS)}	Gate-Threshold Voltage* (V _{DS} =V _{GS} , I _D =250μAdc)	1.0	---	2.5	Vdc
I _{GSS}	Gate-body Leakage* (V _{DS} =0Vdc, V _{GS} =±20Vdc)	---	---	±0.1	μAdc
I _{DSS}	Zero Gate Voltage Drain Current* (V _{DS} =60Vdc, V _{GS} =0Vdc) (V _{DS} =0Vdc, V _{GS} =±20Vdc, T _J =125°C)	---	---	1 500	μAdc
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 =50mAdc) (V _{GS} =10Vdc, I _D =500mAdc)	---	---	3.0 2.0	Ω
g _{FS}	Forward Tran Conductance* (V _{DS} =10Vdc, I _D =200mAdc)	80	---	---	ms
C _{ISS}	Input Capacitance	---	---	50	pF
C _{OSS}	Output Capacitance	---	---	25	
C _{RSS}	Reverse Transfer Capacitance	---	---	5	

V_{DS}=25Vdc, V_{GS}=0Vdc, f=1MHz

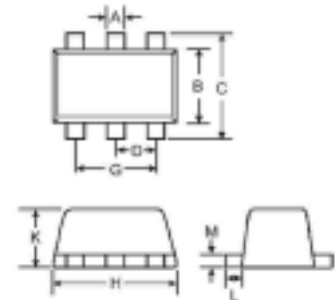
Switching

t _{d(on)}	Turn-on Time	V _{DD} =30Vdc, V _{GEN} =10Vdc	---	---	20	ns
t _{d(off)}	Turn-off Time	R _L =150Ω, I _D =200mA, R _G =25Ω	---	---	20	

* Pulse test, pulse width ≅ 300 μ s, duty cycle ≅ 20%

N-Channel MOSFET

SOT-563



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.006	.011	0.15	0.30	
B	.043	.049	1.10	1.25	
C	.061	.067	1.55	1.70	
D	.020		0.50		
G	.035	.043	0.90	1.10	
H	.059	.067	1.50	1.70	
K	.022	.023	0.56	0.60	
L	.004	.011	0.10	0.30	
M	.004	.007	0.10	0.18	

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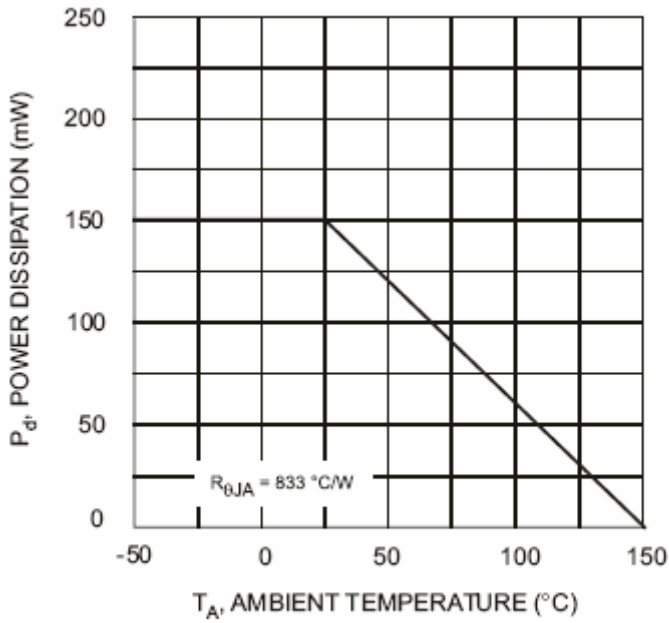
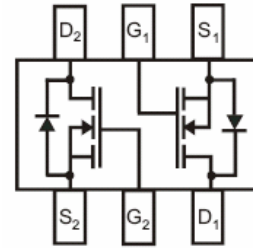


Fig. 1, Derating Curve - Total



Marking: KAS