Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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2N7002V

N-Channel MOSFET

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
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	833	℃/W
T_J	Operating Junction Temperature	-55 to +150	℃
T_{STG}	Storage Temperature	-55 to +150	℃

Electrical Characteristics @ 25°C Unless Otherwise Specified

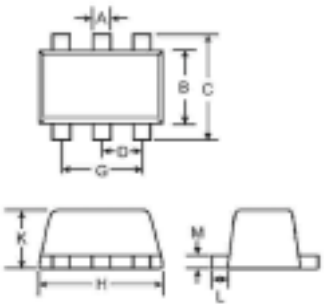
Symbol	Parameter		Min	Typ	Max	Units
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage* (V_{GS}=0Vdc, I_D=10μAdc)		60	70	---	Vdc
$V_{th(GS)}$	Gate-Threshold Voltage* (V_{DS}=V_{GS}, I_D=250μAdc)		1.0	---	2.5	Vdc
I_{GSS}	Gate-body Leakage* (V_{DS} =0Vdc, V_{GS} =±20Vdc)		---	---	±0.1	μAdc
I_{DSS}	Zero Gate Voltage Drain Current* (V_{DS} =60Vdc, V_{GS} =0Vdc) (V_{DS} =0Vdc, V_{GS} =±20Vdc, T_j=125℃)		--- ---	--- ---	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	V_{DS}=25Vdc, V_{GS} =0Vdc f=1MHz	---	---	50	pF
C_{OSS}	Output Capacitance		---	---	25	
C_{rSS}	Reverse Transfer Capacitance		---	---	5	

Switching

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

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

SOT-563



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
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	

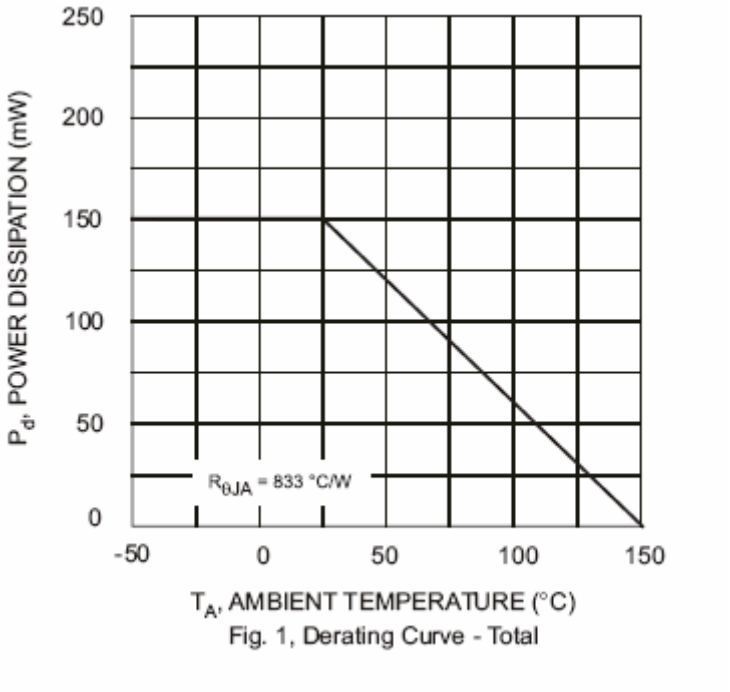
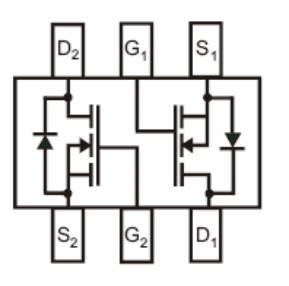


Fig. 1, Derating Curve - Total



Marking: KAS