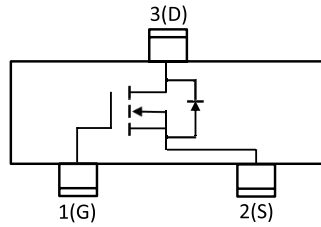


N Channel Small Signal MOSFET multicomp^{PRO}



Device Schematic & PIN Configuration



Pin Assignment		
1	G	Gate
2	S	Source
3	D	Drain

**RoHS
Compliant**

Features

- Voltage Controlled Small Signal Switch
- ESD Protected
- High Density Cell Design for Low On-Resistance
- Load Switch for Portable Devices

Maximum Ratings @TA = +25°C

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	340	mA
Collector Power Dissipation	P_D	350	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	$^{\circ}C/W$
Junction Temperature	T_j	150	$^{\circ}C$
Storage Temperature Range	T_{STG}	-50 to +150	

Electrical Characteristics @TA = +25°C

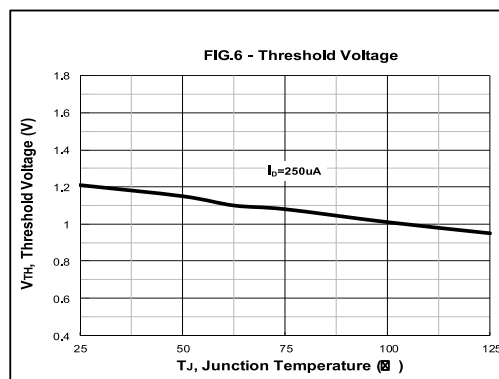
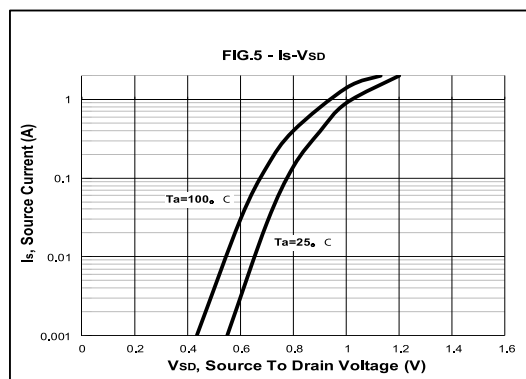
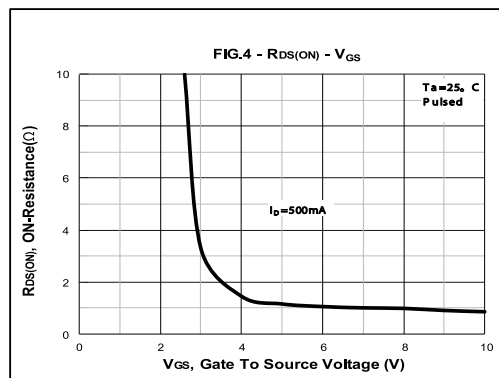
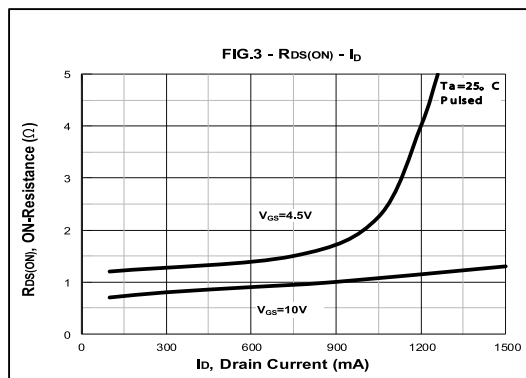
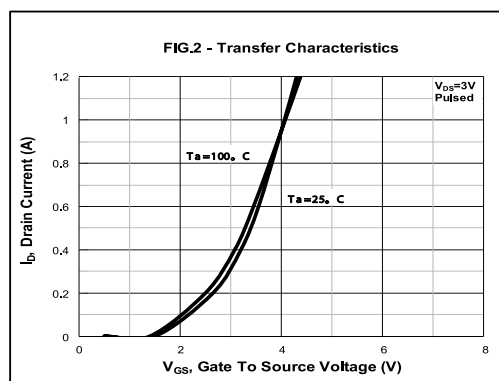
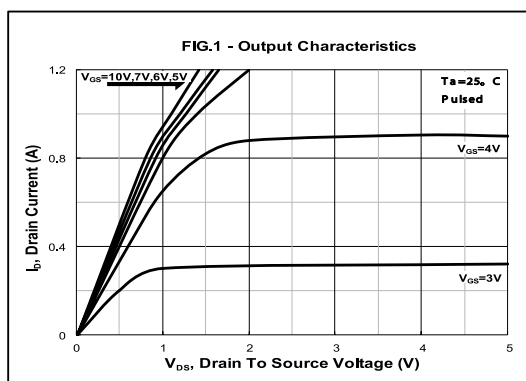
Parameter	Test Conditions	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=250\mu A$	V_{DS}	60	--	--	V
Gate-Threshold Voltage (Note1.)	$V_{DS}=V_{GS}, I_D=250\mu A$	$V_{th(GS)}$	1	1.3	2.5	
Gate-Body Leakage	$V_{DS}=0V, V_{GS}=\pm 20V$	I_{GSS1}	-	--	± 10	μA
	$V_{DS}=0V, V_{GS}=\pm 10V$	I_{GSS}	-	--	± 200	nA
	$V_{DS}=0V, V_{GS}=\pm 5V$	I_{GSS}	-	--	± 100	
Zero Gate Voltage Drain Current	$V_{DS}=60V, V_{GS}=0V$	I_{DSS}	-	--	1	μA
Drain-Source On-Resistance	$V_{GS}=10V, I_D=500mA$	$R_{DS(ON)}$	-	0.9	5	Ω
	$V_{GS}=4.5V, I_D=200mA$		-	1.1	5.3	
Diode Forward Voltage	$I_S=300mA, V_{GS}=0V$	V_{SD}	-	--	1.5	V
Switching Parameter						
Input Capacitance (Note2.)	$V_{DS}=10V, V_{GS}=0V, F=1MHz$	C_{iss}	-	--	40	pF
Output Capacitance (Note2.)		C_{oss}	-	--	30	
Reverse Transfer Capacitance (Note2.)		C_{rss}	-	--	10	

N Channel Small Signal MOSFET multicomp^{PRO}

Parameter	Test Conditions	Symbol	Min.	Typ.	Max.	Unit
Dynamic Parameter						
Turn-on Time (Note2.)	V _{DD} =50V, R _L =250Ω, V _{GS} =10V, R _{GS} =50Ω, R _G =50Ω	td(ON)	-	--	10	ns
Turn-off Time (Note2.)		td(Off)	-	--	15	
Reverse Recovery Time	V _{GS} =0V, I _S =300mA, V _R =25V, Dis/dt=-100a/us	t _{rr}	-	30	--	

Notes:1.Pulse Test:Pulse Width ≤300us,Duty Cycles≤2%.
2.These parameters have on way to verify.

Rating and Characteristic Curves

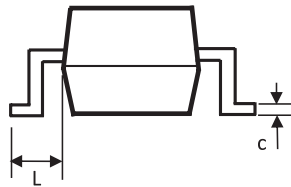
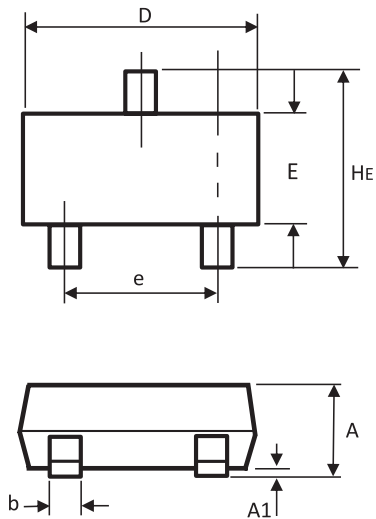


Dimensions : Millimetres

Newark.com/multicomp-pro
Farnell.com/multicomp-pro
sg.element14.com/b/multicomp-pro

multicomp^{PRO}

N Channel Small Signal MOSFET multicomp^{PRO}



SOT23 Package		
Dim	Min	Max
A	0.9	1.15
A1	0	0.1
b	0.3	0.5
c	0.08	0.15
D	2.8	3
E	1.2	1.4
e	1.8	2
L	0.55 REF	
HE	2.25	2.55

Part Number Table

Description	Part Number
N Channel MOSFET, 60V, 340mA, SOT23	2N7002K

Important Notice : This data sheet and its contents (the "Information") belong to the members of the AVNET group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp Pro is the registered trademark of Premier Farnell Limited 2019.

Newark.com/multicomp-pro
 Farnell.com/multicomp-pro
 sg.element14.com/b/multicomp-pro

multicomp^{PRO}