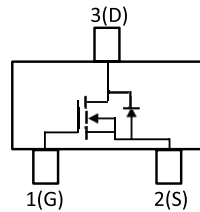


P Channel Enhancement Mode Field Effect Transistor

multicomp PRO

RoHS
Compliant

Device Schematic & PIN Configuration



Pin Assignment		
1	G	Gate
2	S	Source
3	D	Drain

Features

- Trench Power LV MOSFET Technology
- High Power and Current Handling Capability

Applications

- PWM Application
- Load Switch for Devices

Maximum Ratings @TA = +25°C

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	± 10	V
Drain Current	I_D	-3	A
Pulsed Drain Current	I_{DM}	-14	A
Power Dissipation	P_D	1	W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	125	°C/W

P Channel Enhancement Mode Field Effect Transistor **multicomp** PRO

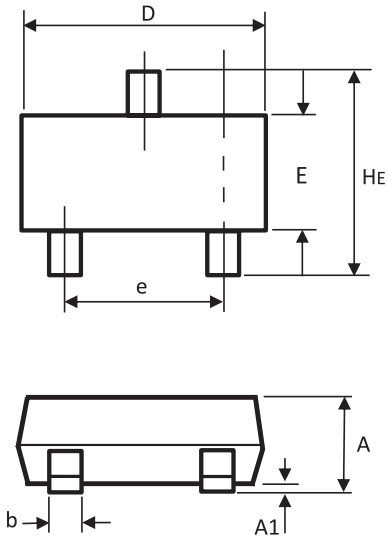
Electrical Characteristics @TA = +25°C

Parameter	Test Conditions	Symbol	Min.	Typ.	Max.	Unit	
Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=250\mu A$	V_{DSS}	-20	--	--	V	
Gate-Threshold Voltage	$V_{DS}=V_{GS}, I_D=250\mu A$	$V_{th(GS)}$	-0.5	-0.64	-1		
Gate-Body Leakage Current	$V_{DS}=0V, V_{GS}=\pm 10V$	I_{GSS}	--	--	± 100	nA	
Zero Gate Voltage Drain Current	$V_{DS}=20V, V_{GS}=0V$	I_{DSS}			-1	μA	
Body-Diode Continuous Current		I_S			-3	A	
Static Drain-Source On-Resistance	$V_{GS}=4.5V, I_D=3A$	$R_{DS(ON)}$			60	95	m Ω
	$V_{GS}=2.5V, I_D=2A$				77	130	
Diode Forward Voltage	$I_S=3A, V_{GS}=0V$	V_{SD}	-0.8	-1.2	V		
Input Capacitance	$V_{DS}=-10V, V_{GS}=0V, F=1MHz$	C_{iss}	--	550	--	pF	
Output Capacitance		C_{oss}		89			
Reverse Transfer Capacitance		C_{rss}		65			
Total Gate Charge		Q_g		4.3			
Gate Source Charge	$V_{GS}=4.5V, V_{DS}=10V, I_D=3A$	Q_{gs}	0.8	--	nC		
Gate Drain Charge		Q_{gd}	1.1				
Turn-on Delay Time		$t_{d(ON)}$	12				
Turn-on Rise Time	$V_{GS}=4.5V, V_{DD}=10V, I_D=1A, R_{GEN}=2.5\Omega$	t_R	54	ns			
Turn-off Delay Time		$t_{d(Off)}$	15				
Turn-off Fall Time		t_F	9				
Notes: 1.Pulse Test : Pulse Width $\leq 300\mu s$, Duty cycle $\leq 2\%$ 2.Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch.							

P Channel Enhancement Mode Field Effect Transistor

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Outline Dimensions



SOT23 Package		
Dim	Min	Max
A	0.9	1.15
A1	0	0.1
b	0.3	0.5
c	0.1	0.2
D	2.8	3
E	1.2	1.4
e	1.8	2
L	0.55 REF	
HE	2.25	2.55

Dimensions : Millimetres

Part Number Table

Description	Part Number
P Channel Enhancement Mode FET, 20V, -3A, SOT-23	HMT03P02S

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