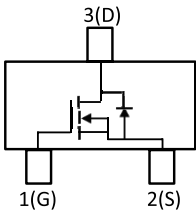


P Channel Enhancement Mode Field Effect Transistor

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 _{θJA}	125	°C/W

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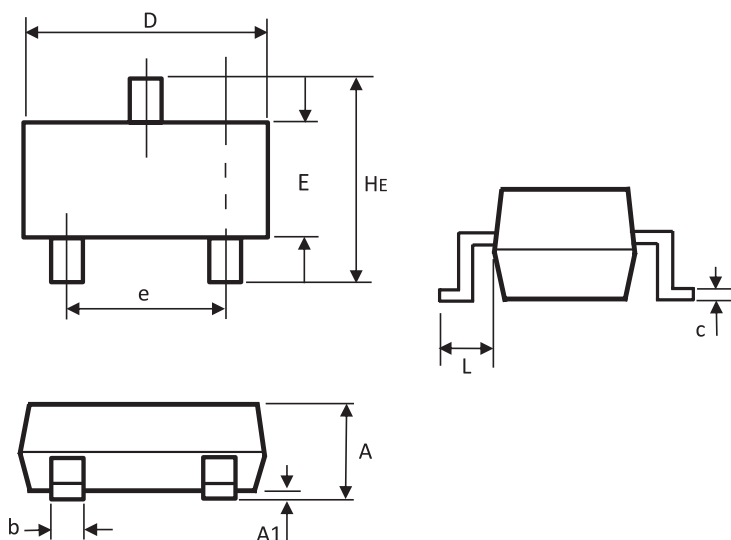
Electrical Characteristics @TA = +25°C

Parameter	Test Conditions	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =250uA	V _{DSS}	-20	--	--	V
Gate-Threshold Voltage	V _{DS} =V _{GS} , I _D =250uA	V _{th(GS)}	-0.5	-0.64	-1	
Gate-Body Leakage Current	V _{DS} =0V, V _{GS} =±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	mΩ
	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	V _{GS} =4.5V, V _{DS} =10V, I _D =3A	Q _g		4.3		nC
Gate Source Charge		Q _{gs}		0.8		
Gate Drain Charge		Q _{gd}	1.1			
Turn-on Delay Time	V _{GS} =4.5V, V _{DD} =10V, I _D =1A, R _{GEN} =2.5Ω	t _{d(ON)}	12	--	ns	
Turn-on Rise Time		t _R	54			
Turn-off Delay Time		t _{d(Off)}	15			
Turn-off Fall Time		t _F	9			
Notes: 1.Pulse Test : Pulse Width ≤ 300us,Duty cycle ≤ 2% 2.Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch.						

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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	
H _E	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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