

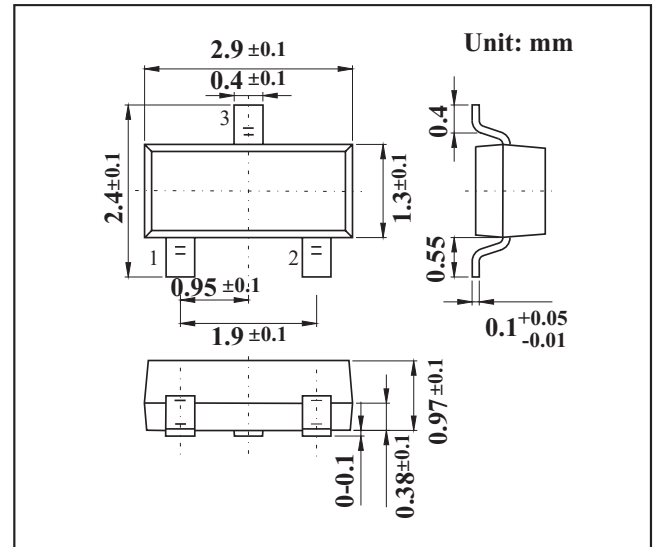
SOT-23 Plastic-Encapsulate MOSFETS

Features

- P-Channel -60V (D-S) MOSFE
- T ●TrenchFET Power MOSFET

MECHANICAL DATA

- Case style:SOT-23molded plastic
- Mounting position:any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Drain-source voltage	V _{DS}	-60	V
Gate-source voltage	V _{GS}	± 20	V
Continuous drain current (T _J = 150 °C) *1, 2 T _A =25 °C T _A =100 °C	I _D	-1.25 -0.85	A
Pulsed drain current	I _{DM}	-8	A
Avalanche Current L = 0.1 mH	I _{AS}	-5	A
Maximum Power dissipation *1,2 T _A =25 °C T _A =70 °C	P _D	1.25 0.8	W
Operating junction and storage temperature range	T _J , T _{stg}	- 5 5 t o + 1 5 0	°C

*1 Surface Mounted on FR4 Board.

*2 t ≤ 5 sec

Thermal Resistance Ratings Ta = 25 °C

Parameter	Symbol	Typical	Maximum	Unit
Maximum Junction to Ambient* t ≤ 5 s e c Steady State	R _{thJA}		100	°C/W
		130	166	
Maximum Junction-to-Lead* Steady State	R _{thJL}	45	60	

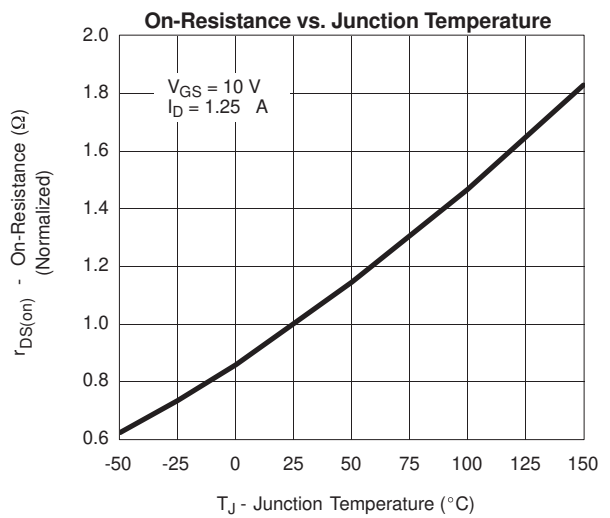
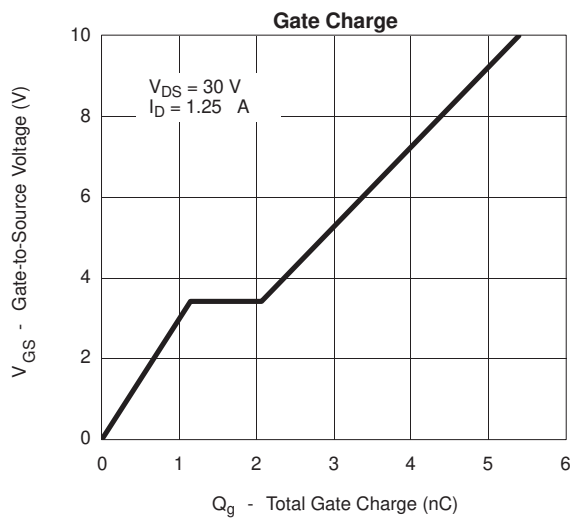
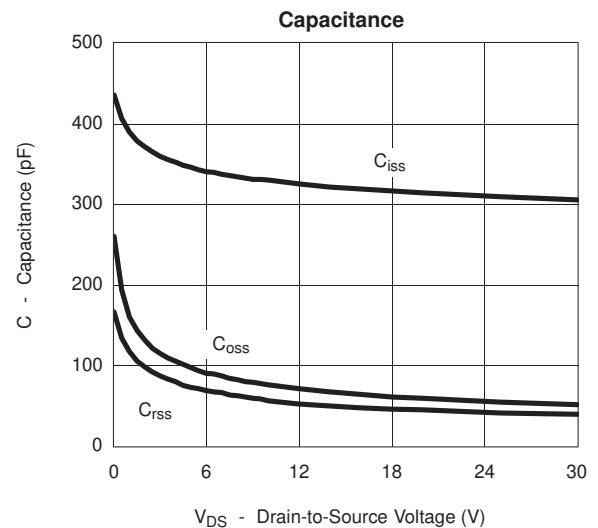
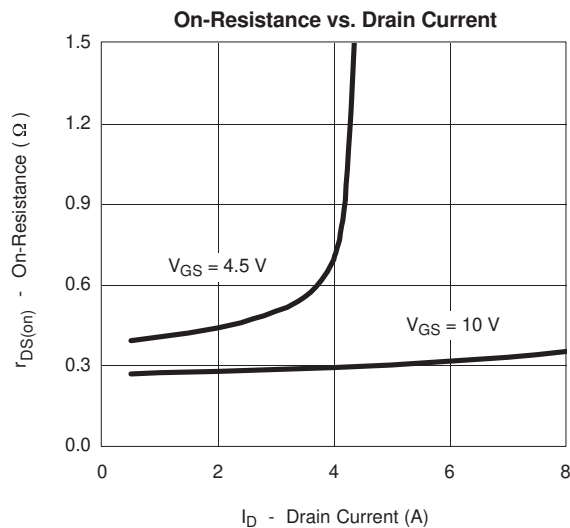
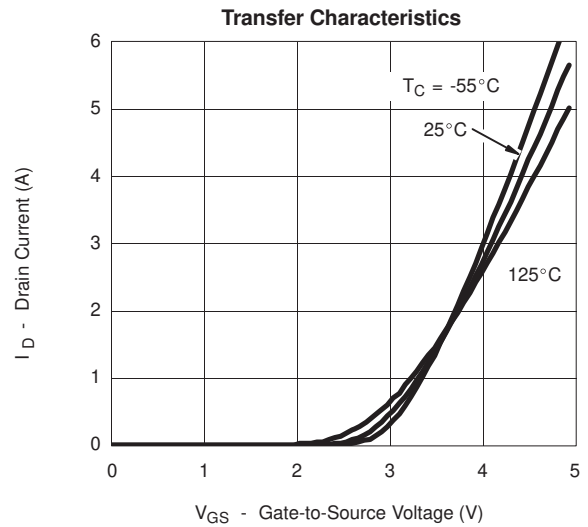
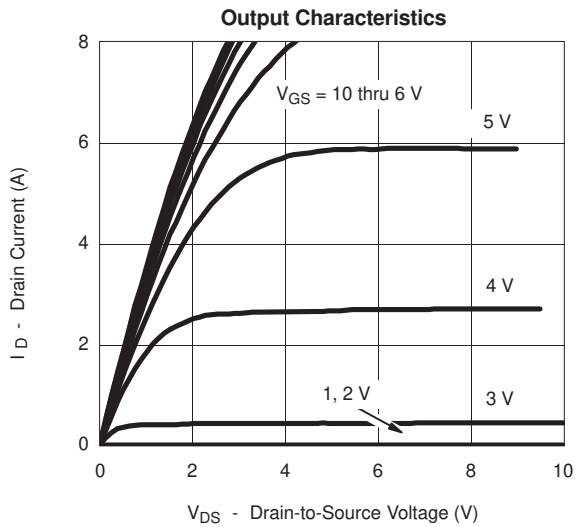
* Surface Mounted on FR4 Board.

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0 V, I _D = - 2 5 0 μA	-60			V
Gate threshold voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = - 2 5 0 μA	-1			
Gate-body leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ± 20 V			± 100	nA
Zero gate voltage drain current	I _{DSS}	V _{DS} = - 4 8 V, V _{GS} = 0 V			- 1	μ A
		V _{DS} = -48V, V _{GS} = 0 V, T _J = 1 2 5 °C			-50	
On-state drain current	I _{D(on)}	V _{DS} ≥ - 4 . 5 V, V _{GS} = - 1 0 V	-6			A
Drain-source on-state resistance	r _{DS(on)}	V _{GS} = - 1 0 V, I _D = -1.25 A		0.275	0.340	Ω
		V _{GS} = - 4.5 V, I _D = -1 A		0.406	0.550	
Forward transconductance	g _{fs}	V _{DS} = - 4.5 V, I _D = - 1 A		1.9		S
Total gate charge *	Q _g	V _{DS} = - 3 0 V, V _{GS} = - 1 0 V, I _D = -1.25 A		5.4	12	nC
Gate-source charge *	Q _{gs}		1.15			
Gate-drain charge *	Q _{gd}		0.92			
Turn-On Delay Time	t _{d(on)}	V _{DD} = - 3 0 V, R _L = 3 0 Ω I _D = - 1 A, V _{GEN} = -4.5V, R _G = 6 Ω		10.5	20	ns
Rise Time	t _r		11.5	20		
Turn-Off Delay Time	t _{d(off)}		15.5	30		
Fall Time	t _f		7.5	15		
Continuous Current	I _S				-1.25	A
Pulsed Current	I _{SM}				-8	A
Diode Forward Voltage*	V _{SD}	I _S = -1.25 A, V _{GS} = 0 V	-0.82		-1.2	V
Source-Drain Reverse Recovery Time	t _{rr}	I _F = -1.25 A, di/dt = 1 0 0 A / s μ		30	55	ns

* Pulse test: PW ≤ 300 μ s duty cycle ≤ 2%.

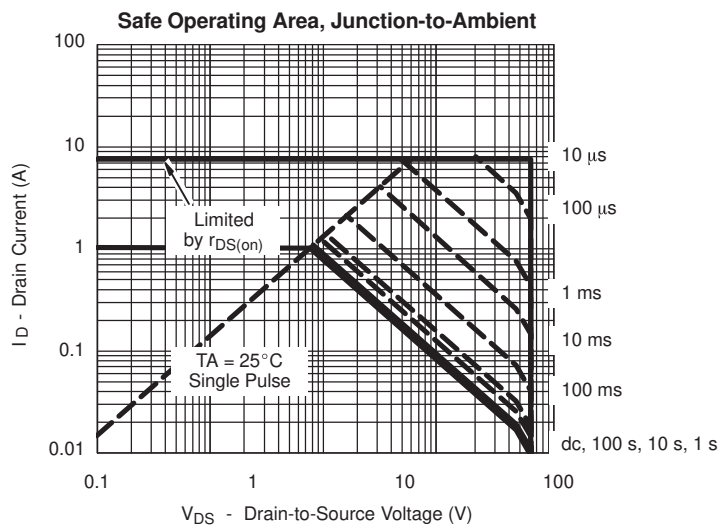
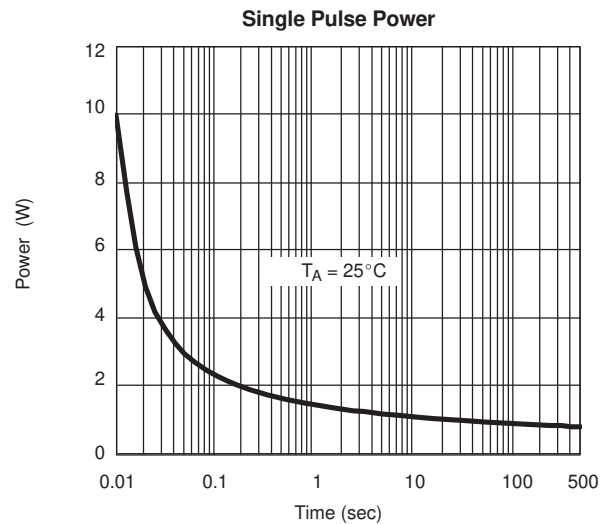
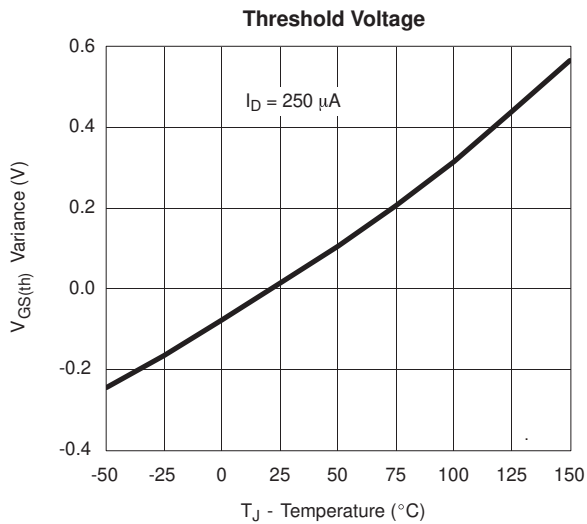
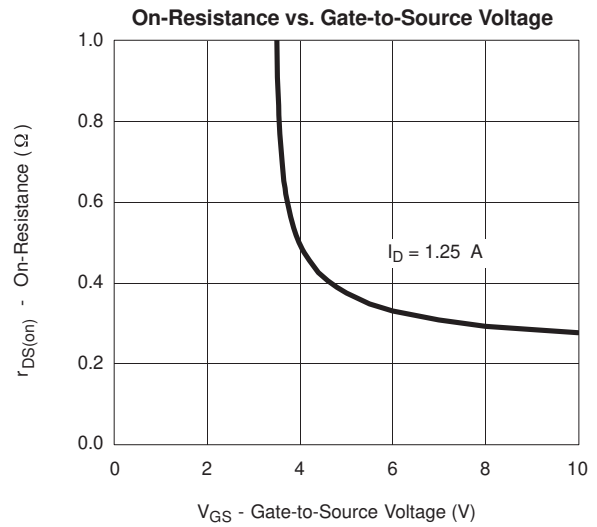
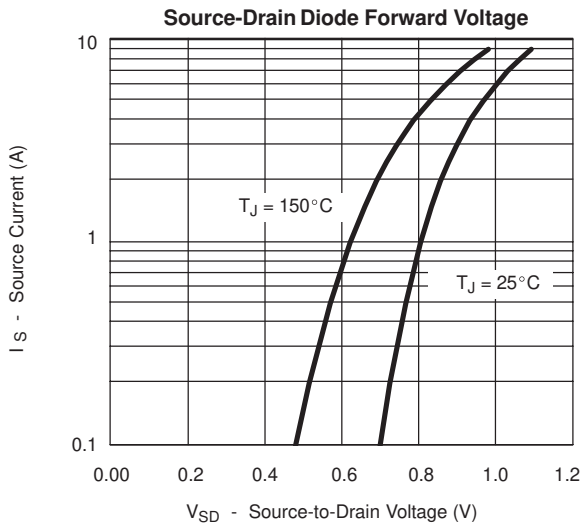


RATINGS AND CHARACTERISTIC CURVES



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Typical Characteristics



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