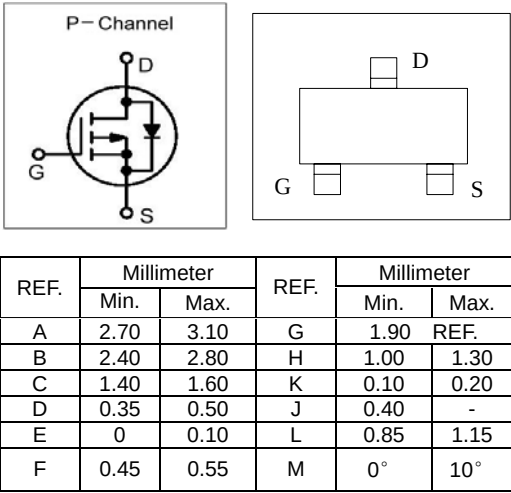
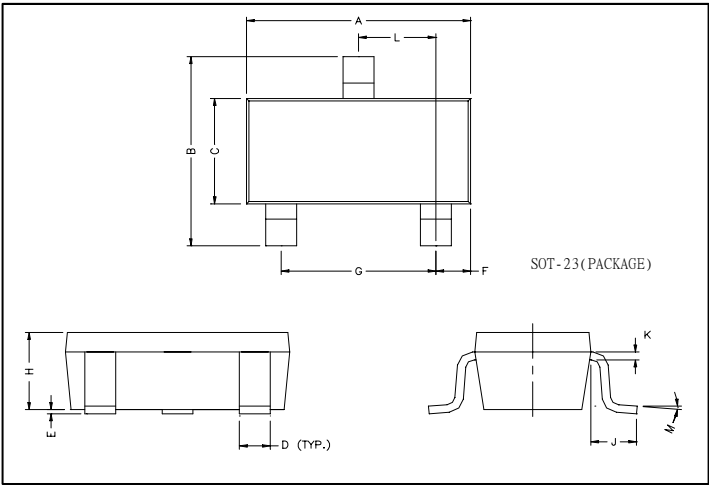


30V N-Channel Enhancement Mode MOSFET

VDS= 30V
RDS(ON), Vgs@10V, Ids@5.8A < 38m
RDS(ON), Vgs@4.5V, Ids@5.0A < 52m

Features
Advanced trench process technology
High Density Cell Design For Ultra Low On-Resistance
Package Dimensions



ABSOLUTE MAXIMUM RATINGS (Ta = 25°C Unless otherwise noted)

Parameter	Symbol	Typical	Unit
Drain-Source Voltage	V _{DSS}	30	V
Gate-Source Voltage	V _{GSS}	±20	V
Continuous Drain Current (T _J =150°C)	I _D	5.8	A
		4.9	
Pulsed Drain Current	I _{DM}	30	A
Power Dissipation	P _D	1.4	W
		1.0	
Maximum Body-Diode Continuous Current		2.5	A
Operation Junction Temperature	T _J	-55	C
Storage Temperature Range	T _{STG}	-55/150	C
Thermal Resistance-Junction to Ambient	R θ JA	150	W

ELECTRICAL CHARACTERISTICS ($T_a = 25^{\circ}\text{C}$ Unless otherwise noted)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Static						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=250\mu A$	30			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	1.1		3.0	V
Gate Leakage Current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=30V, V_{GS}=0V$			1	μA
On-State Drain Current	$I_{D(on)}$	$V_{DS} \leq 5V, V_{GS}=4.5V$	10			A
Drain-source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=5.8A$ $V_{GS}=4.5V, I_D=5.0A$		33 37	38 52	$m\Omega$
Diode Forward Voltage	V_{SD}	$I_S=1.0A, V_{GS}=0V$		0.7	1.1	V
Dynamic						
Total Gate Charge	Q_g	$V_{DS}=15V, V_{GS}=4.5V$ $I_D \equiv 5.8A$		9.7	12	nC
Gate-Source Charge	Q_{gs}			1.6		
Gate-Drain Charge	Q_{gd}			3.1		
Turn-On Time	$t_{d(on)}$ t_r	$V_{GS}=10V, V_{DS}=10V,$ $R_L=2.7\Omega, V_{GEN}=4.5V$		3.3 4.8	5 7	nS
Turn-Off Time	$t_{d(off)}$ t_f			26.3 4.1	40 6	

TYPICAL CHARACTERISTICS

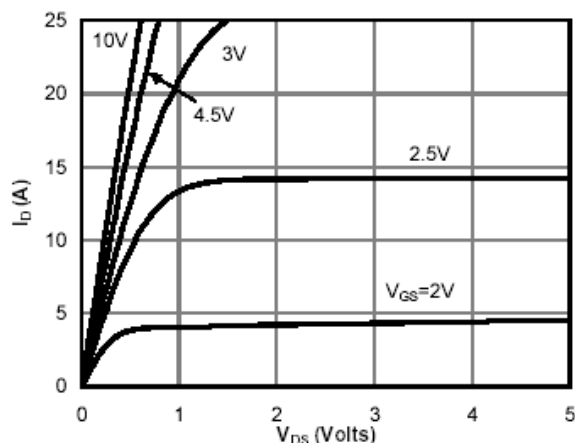


Fig 1: On-Region Characteristics

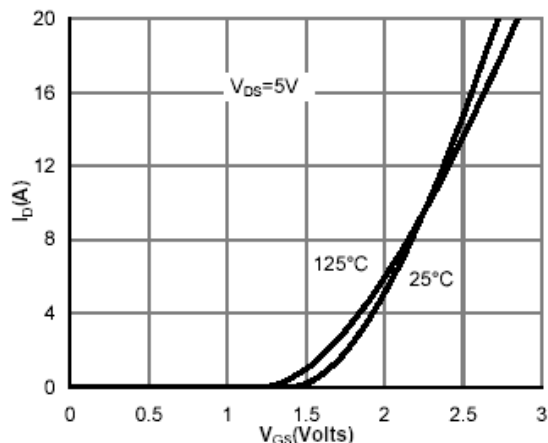


Figure 2: Transfer Characteristics

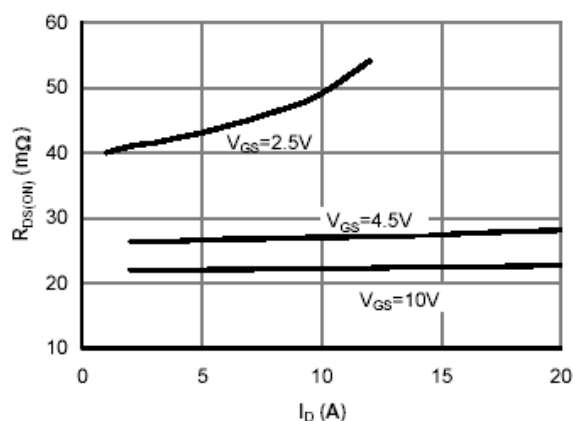


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

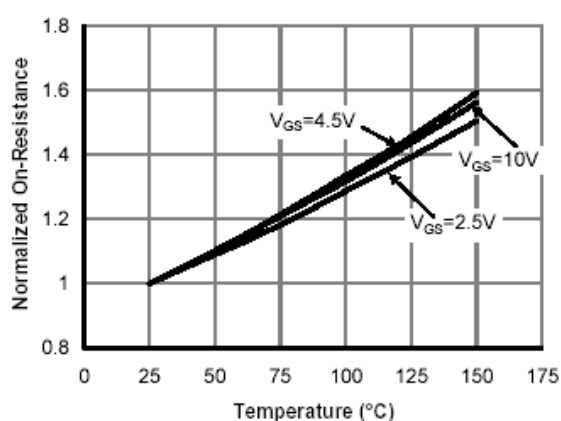


Figure 4: On-Resistance vs. Junction Temperature

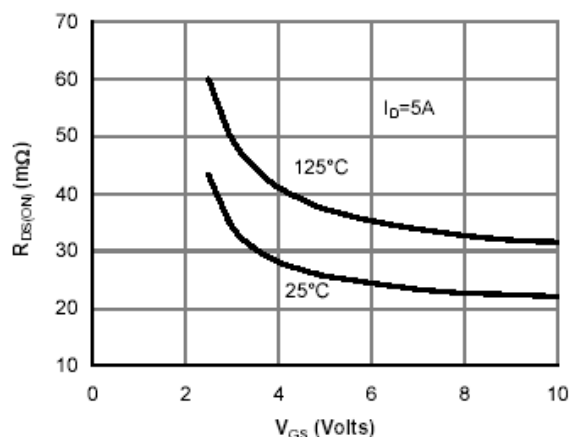


Figure 5: On-Resistance vs. Gate-Source Voltage

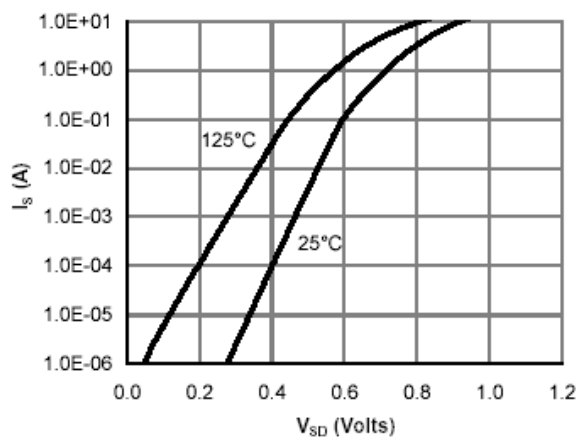


Figure 6: Body-Diode Characteristics

TYPICAL CHARACTERISTICS

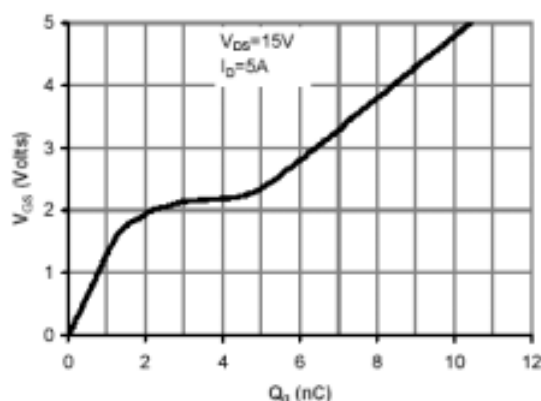


Figure 7: Gate-Charge Characteristics

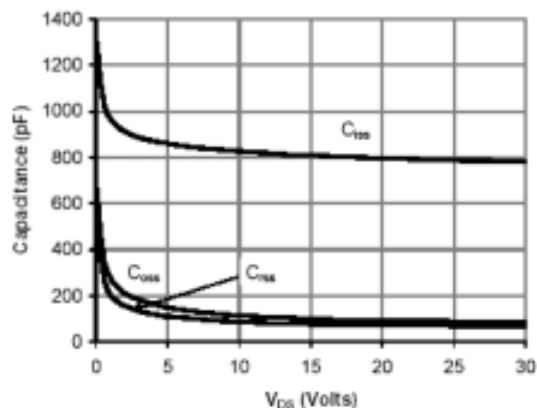


Figure 8: Capacitance Characteristics

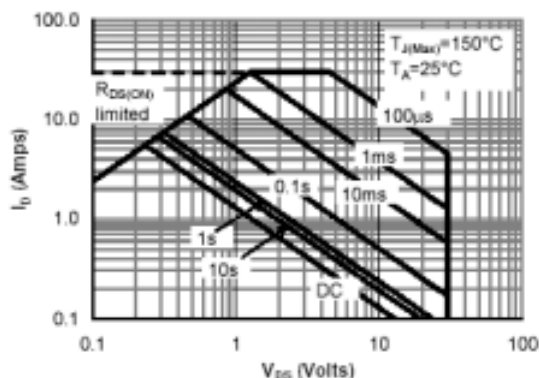


Figure 9: Maximum Forward Biased Safe Operating Area (Note E)

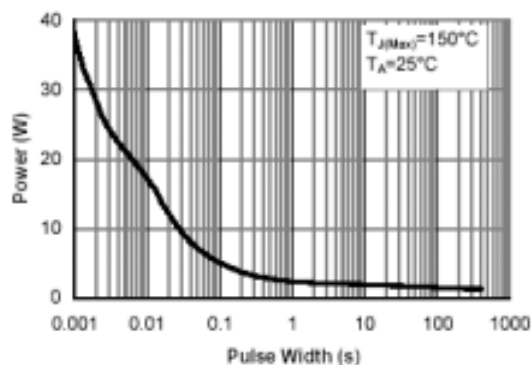


Figure 10: Single Pulse Power Rating Junction-to-Ambient (Note E)

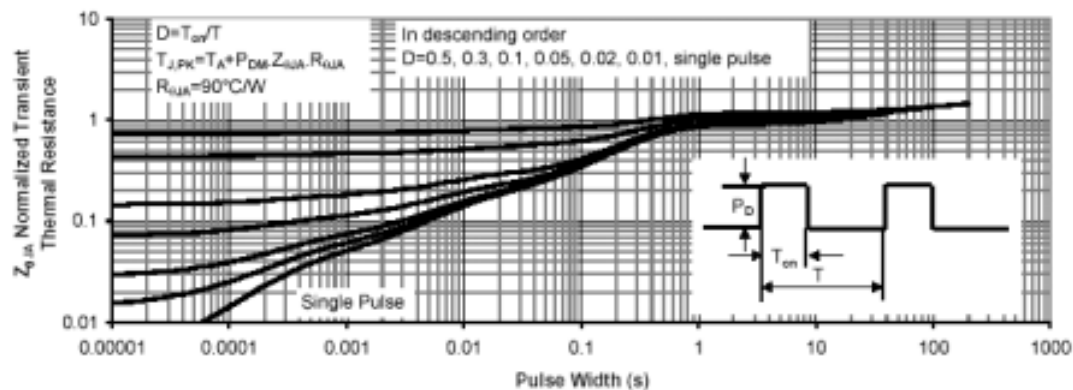


Figure 11: Normalized Maximum Transient Thermal Impedance