



N-Channel and N-Channel Complementary MOSFET

Product Summary

V_{DS}	30V
I_D	45A
$R_{DS(ON)}$ (at $V_{GS}=10V$)	9m
$R_{DS(ON)}$ (at $V_{GS}=4.5V$)	12m
100% EAS Tested	

General Description

Split gate trench MOSFET technology
Excellent package for heat dissipation
High density cell design for low $R_{DS(ON)}$
Moisture Sensitivity Level 3
Epoxy Meets UL 94 V-0 Flammability Rating
Halogen Free

Applications

Power switching application
Uninterruptible power supply
DC-DC convertor

Absolute Maximum Ratings ($T_A=25$ unless otherwise noted)

Parameter		Symbol	Limit	Unit
Drain-source Voltage		V_{DS}	30	V
Gate-source Voltage		V_{GS}	± 20	V
Drain Current	$T_A=25$	I_D	12	A
	$T_A=100$		7.5	
	$T_C=25$		45	
	$T_C=100$		28	
Pulsed Drain Current ^A		I_{DM}	180	A
Avalanche energy ^B		EAS	128	mJ
Total Power Dissipation ^C	$T_A=25$	P_D	2.5	W
	$T_A=100$		1	
	$T_C=25$		100	
	$T_C=100$		40	
Junction and Storage Temperature Range		T_J, T_{STG}	-55 +150	

Thermal resistance

Parameter		Symbol	Typ	Max	Units
Thermal Resistance Junction-to-Ambient ^D	Steady-State	R_{JA}	40	50	/W
Thermal Resistance Junction-to-Case	Steady-State	R_{JC}	1	1.25	

Ordering Information (Example)

PREFERRED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)
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Typical Electrical and Thermal Characteristics Diagrams

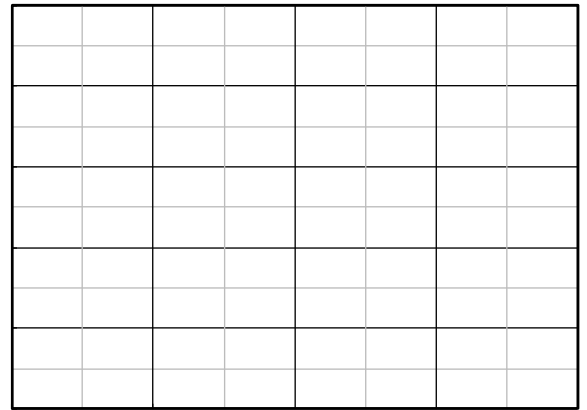


Figure 2. Transfer Characteristics

Figure 1. Output Characteristics

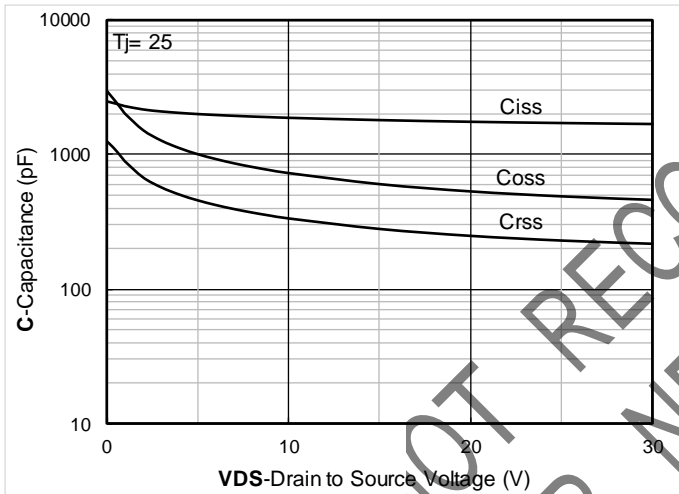


Figure 3. Capacitance Characteristics

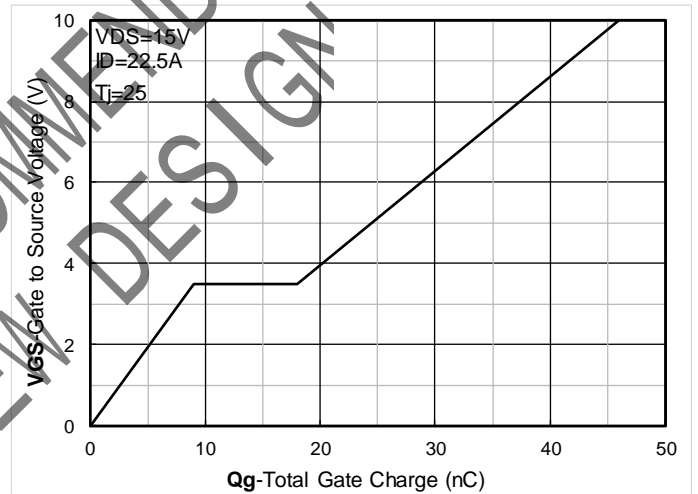


Figure 4. Gate Charge

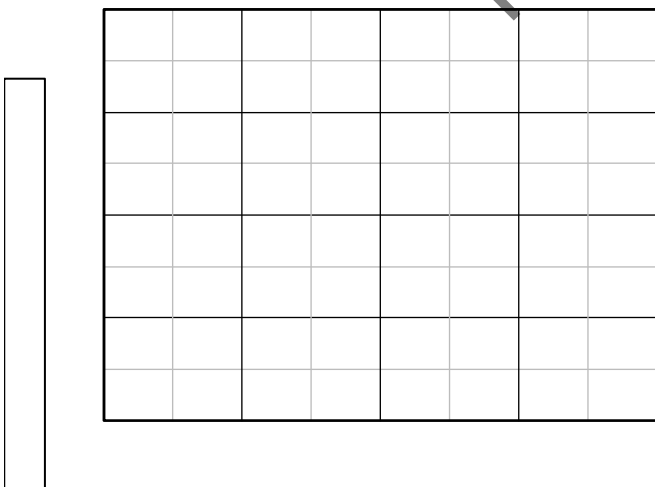


Figure 5. On-Resistance vs Gate to Source Voltage

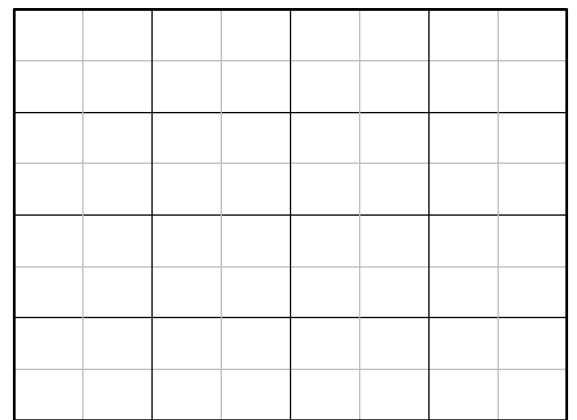


Figure 6. Normalized On-Resistance

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