



## P-Channel Enhancement Mode Field Effect Transistor

### Product Summary

$V_{DS}$	-80 V
$I_D$	-50 A
$R_{DS(ON)}$ ( at $V_{GS}=-10V$ )	17 m
$R_{DS(ON)}$ ( at $V_{GS}=-6V$ )	19 m
$R_{DS(ON)}$ ( at $V_{GS}=-4.5V$ )	22 m
100% EAS Tested	
100% $V_{DS}$ Tested	

### General Description

Split gate trench MOSFET technology  
 Low  $R_{DS(on)}$  & FOM  
 Excellent stability and uniformity  
 Moisture Sensitivity Level 1  
 Epoxy Meets UL 94 V-0 Flammability Rating  
 Halogen Free

### Applications

Switching power supplies  
 Motor drives

### Absolute Maximum Ratings



# YJG50GP08A

## Electrical Characteristics ( $T_J=25$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
<b>Static Parameter</b>						
Drain-Source Breakdown Voltage	$BV_{DSS}$	$V_{GS}=0V, I_D=-250 A$	-80	-	-	V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=-80V, V_{GS}=0V$	-	-	-1	A
		$V_{DS}=-80V, V_{GS}=0V, T_J=150$	-	-	-100	
Gate-Body Leakage Current	$I_{GSS}$	$V_{GS}=\pm 18V, V_{DS}=0V$	-	-	$\pm 100$	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250 A$	-1.2	-2.1	-3	



## Typical Electrical and Thermal Characteristics Diagrams

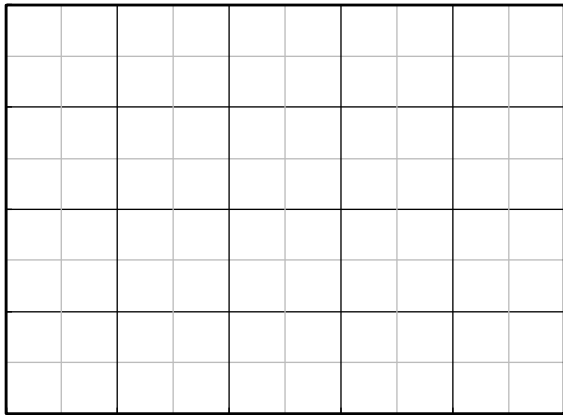


Figure 1. Output Characteristics

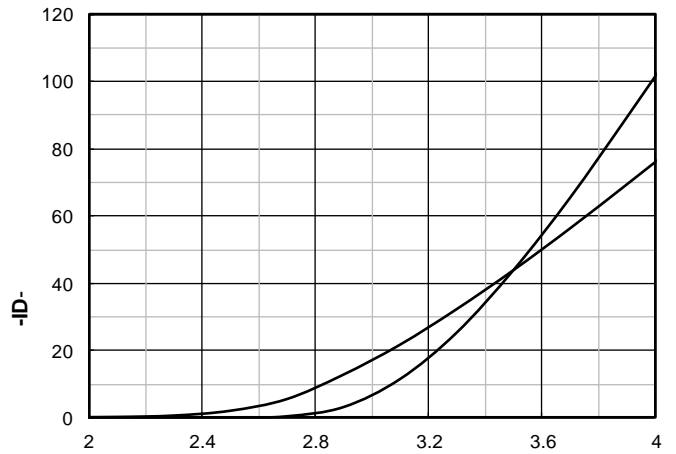


Figure 2. Transfer Characteristics

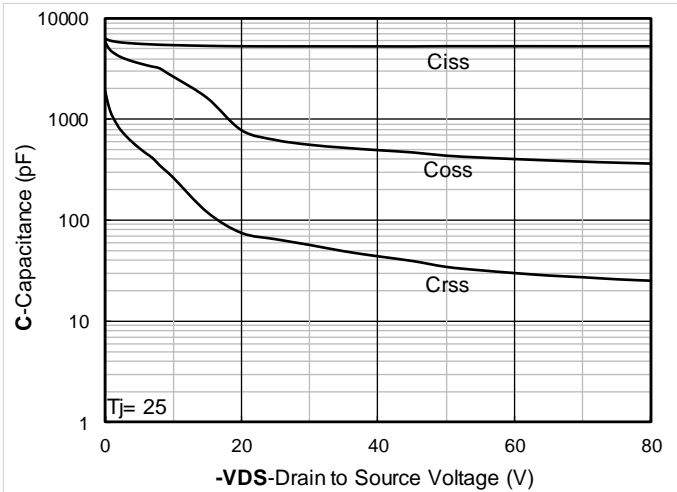


Figure 3. Capacitance Characteristics

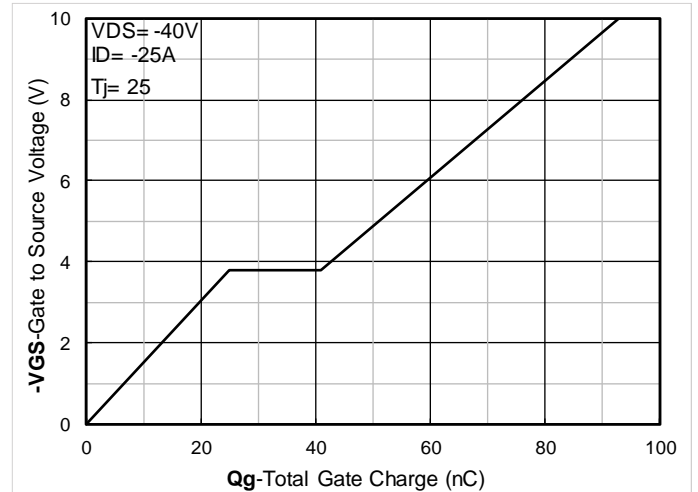


Figure 4. Gate Charge

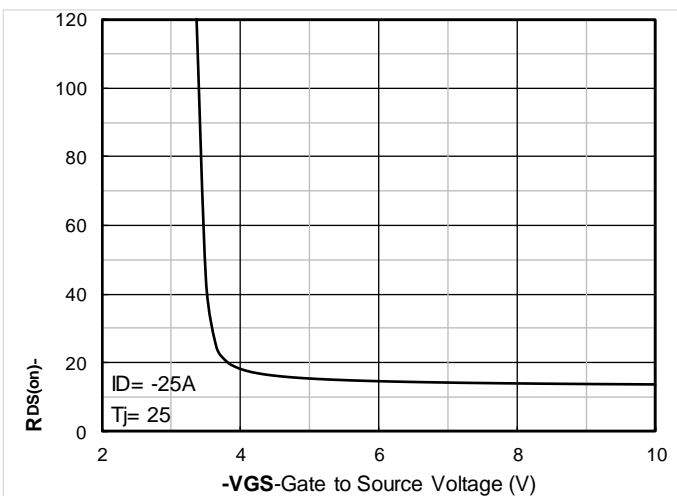


Figure 5. On-Resistance vs Gate to Source Voltage

Figure 6. Normalized On-Resistance



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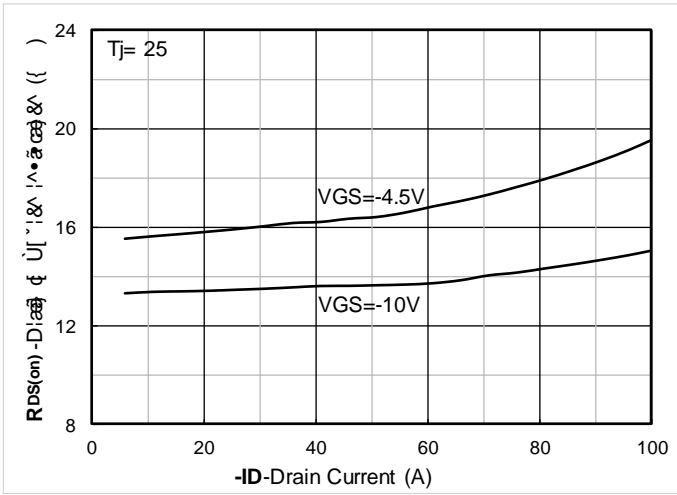


Figure 7.  $R_{DS(on)}$  VS Drain Current

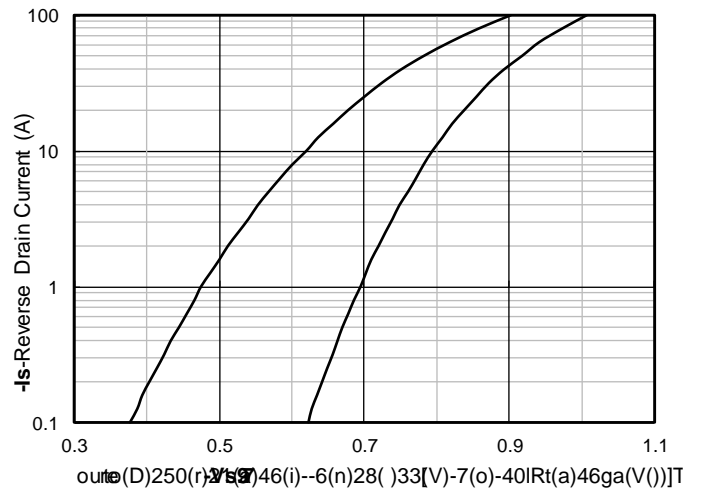


Figure 8. Forward characteristics of reverse diode

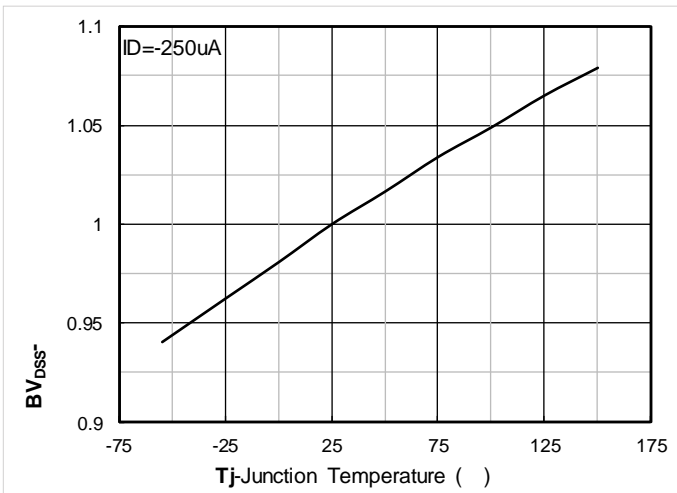


Figure 9. Normalized breakdown voltage

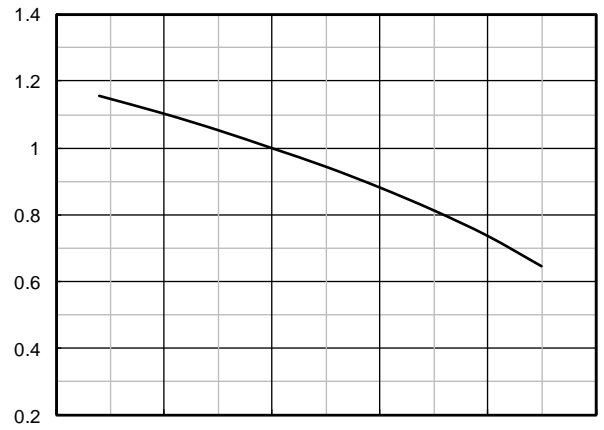


Figure 10. Normalized Threshold voltage







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