



YJF70G10A

N-Channel Enhancement Mode Field Effect Transistor

Product Summary

- V_{DS} 100V
- I_D 70A
- $R_{DS(on)}$ (at $V_{GS}=10V$) 5.5m Ω
- $R_{DS(on)}$ (at $V_{GS}=4.5V$) 6.5m Ω
- 100% EAS Tested
- 100% V_{DS} Tested

General Description

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

Applications

- Power management
- Portable equipment

■ Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter		Symbol	Limit	Units
Drain-source Voltage		V_{DS}	100	V
Gate-source Voltage		V_{GS}	± 20	V
Drain Current	$T_A=25$	I_D	15	A
	$T_A=100$		9.5	
	$T_C=25$		70	
	$T_C=100$		44	
Pulsed Drain Current ^A		I_{DM}	300	A
Avalanche energy ^B		EAS	306	mJ
Total Power Dissipation ^C	$T_A=25$	P_D	2.5	W
	$T_A=100$		1	
	$T_C=25$		62	
	$T_C=100$		25	
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	$R_{\theta JA}$	40	50	/W
Thermal Resistance Junction-to-Case	Steady-State	$R_{\theta JC}$	1.6	2	

■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJF70G10A	B1	YJF70G10A	50	/	5000	

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■ Typical Electrical and Thermal Characteristics Diagrams

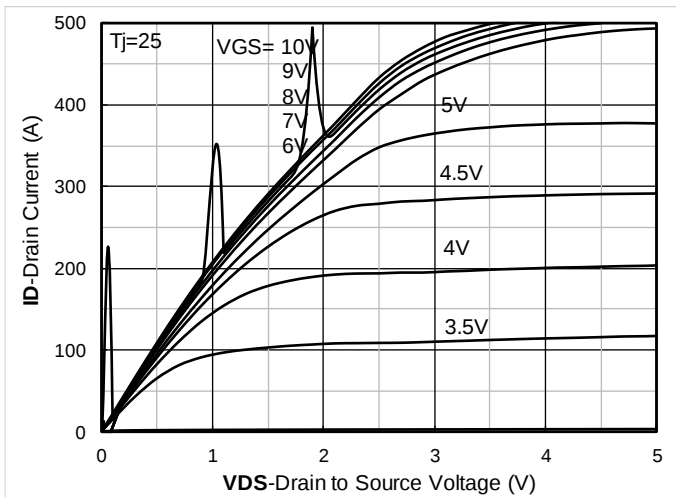


Figure 1. Output Characteristics

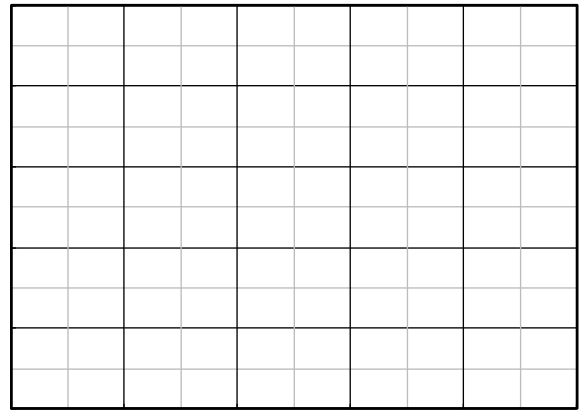


Figure 2. Transfer Characteristics

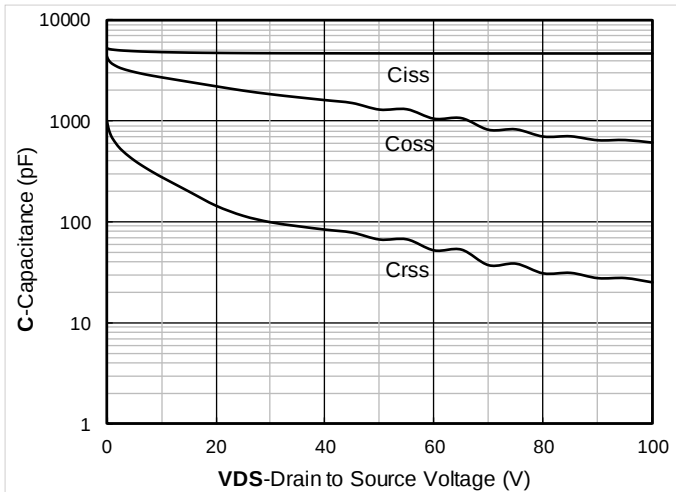


Figure 3. Capacitance Characteristics

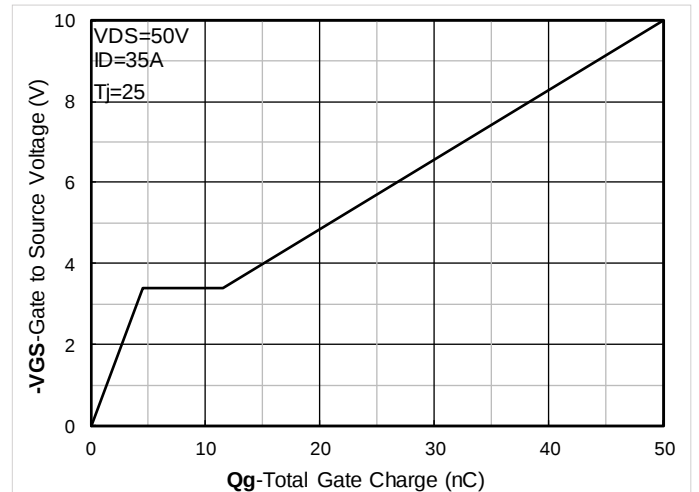


Figure 4. Gate Charge

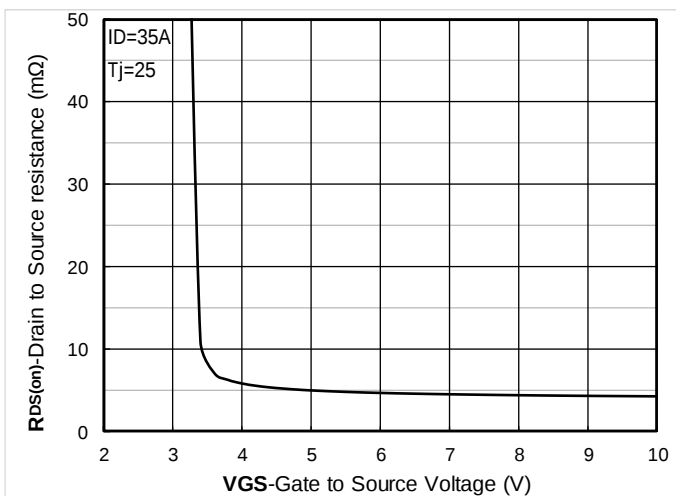


Figure 5. On-Resistance vs Gate to Source Voltage

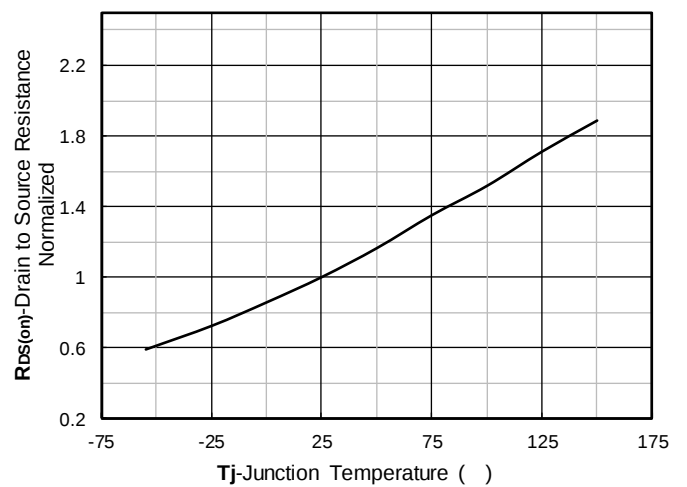


Figure 6. Normalized On-Resistance

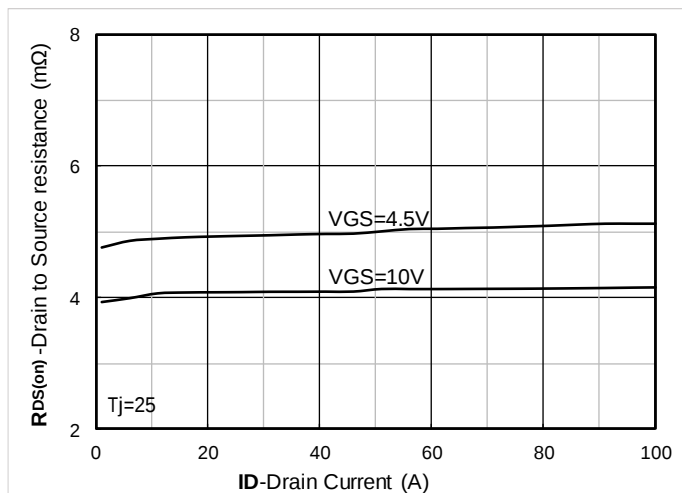


Figure 7. $R_{DS(on)}$ VS Drain Current

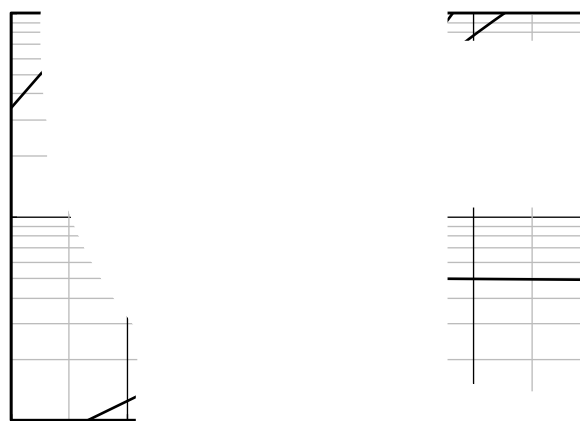


Figure 8. Forward characteristics of reverse diode

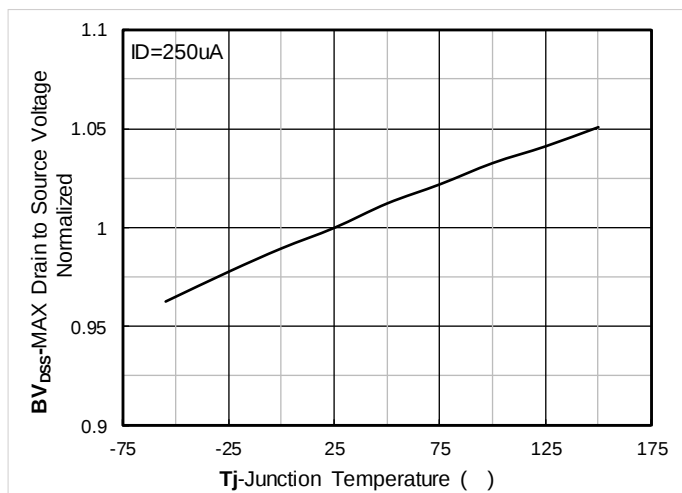


Figure 9. Normalized breakdown voltage

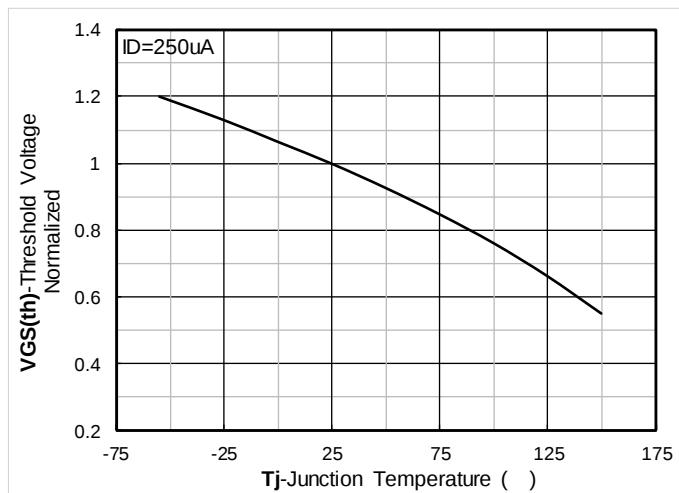


Figure 10. Normalized Threshold voltage

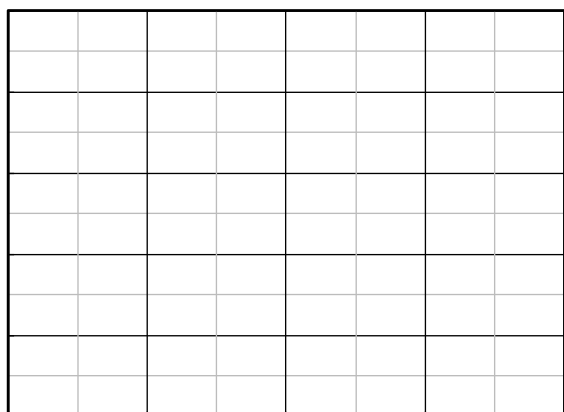


Figure 11. Current dissipation

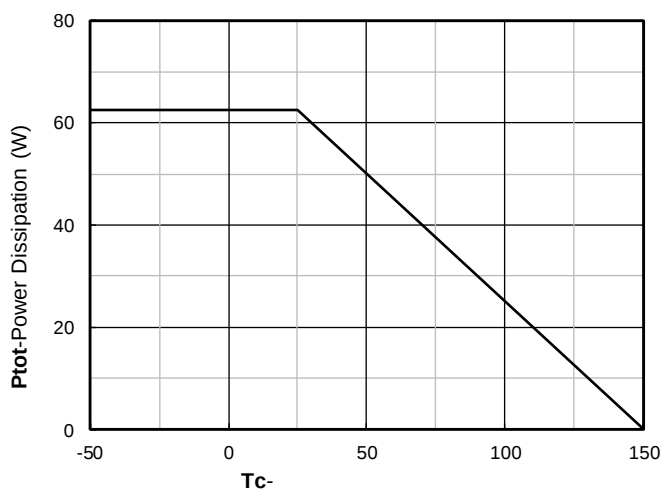


Figure 12. Power dissipation

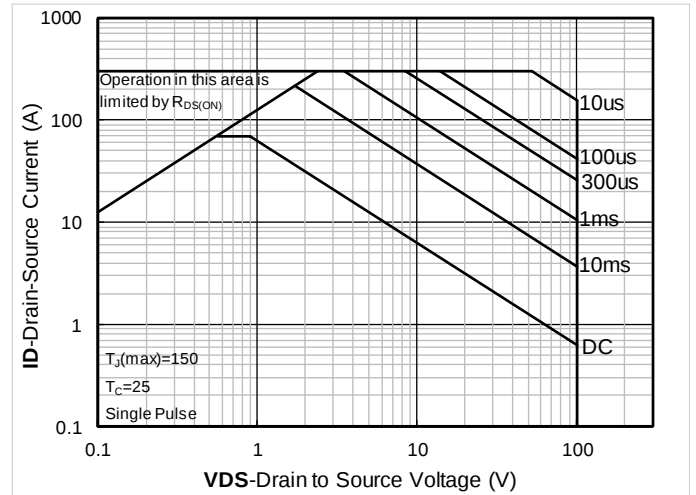
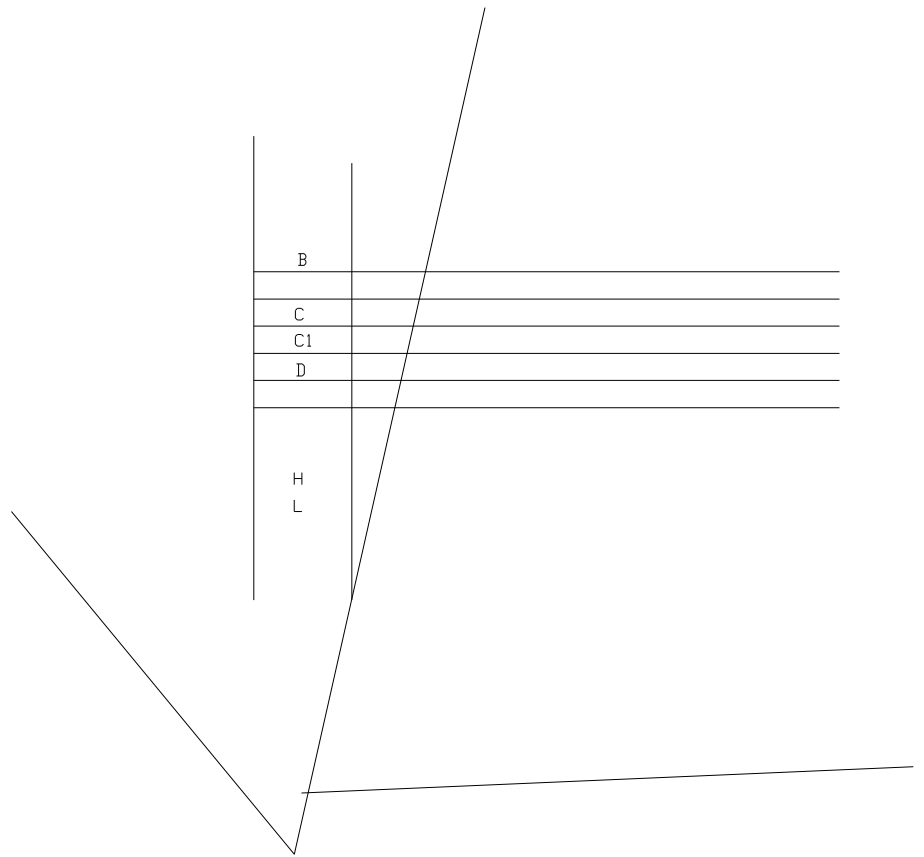


Figure 13. Maximum Transient Thermal Impedance

Figure 14. Safe Operation Area



■ ITO-220AB-B Package information





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