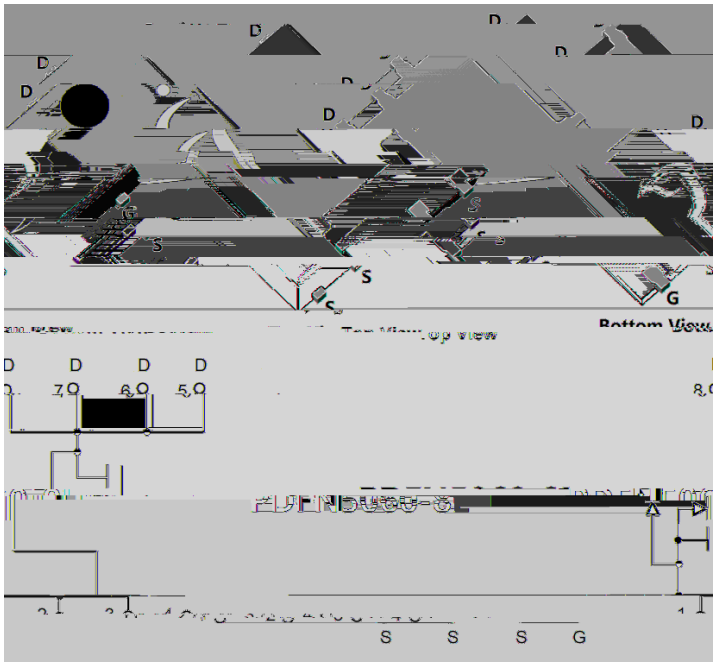
N-Channel Enhancement Mode Field Effect Transistor



Product Summary

- V_{DS} 40V
- I_D 125A
- $R_{DS(ON)}$(at V_{GS}=10V) 3.1mΩ
- 100% EAS Tested
- 100% V_{DS} Tested

General Description

$_A$=25 unless otherwise noted)

Parameter	Symbol	Limit	Unit
Drain-source Voltage	V_{DS}	40	V
Gate-source Voltage	V_{GS}	±20	V

T_A=25

Drain Current

B		EAS	156	mJ
Total Power Dissipation C	T_A=25	P_D	2.7	W
	T_A=100		1.3	
	T_C=25		83	
	T_C =100		41	
Junction and Storage Temperature Range		T_J ,T_{STG}	-55 +175	

■Thermal resistance

Parameter	Symbol	Typ	Max	Units
Thermal Resista MINIMUM				

			PAC K AGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJG125G04HQ	F1	YJG125G04H	5000	10000	100000	13“ reel

■ Electrical Characteristics (T_J=25 unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}= 0V, I_D=1mA	40	-	-	V
		$_{DS}$=32V, V_{GS}=0V	-	-	1	μA
		V_{GS} $_{DS}$=0V	-	-	±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}= V_{GS}, I_D=250μA	2	3	4	V
Static Drain-Source On-Resistance	R	=10V, I =20A	-	2.4	3.1	mΩ
Diode Forward Voltage	V_{SD}	I_S=20A, V_{GS}=0V	-	0.8	1.2	V
Gate resistance	R_G					

■Typical Electrical and Thermal Characteristics Diagrams

Figure 1. Output Characteristics

Figure 2. Transfer Characteristics

Figure 3. Capacitance Characteristics

Figure 4. Gate Charge

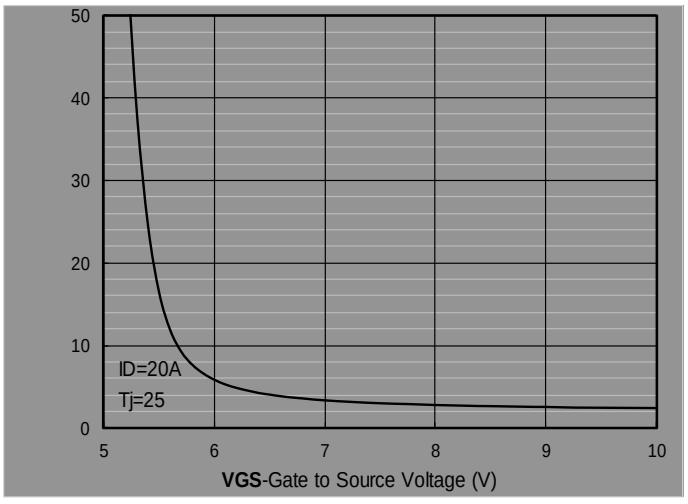


Figure 7. $R_{DS(on)}$ VS Drain Current

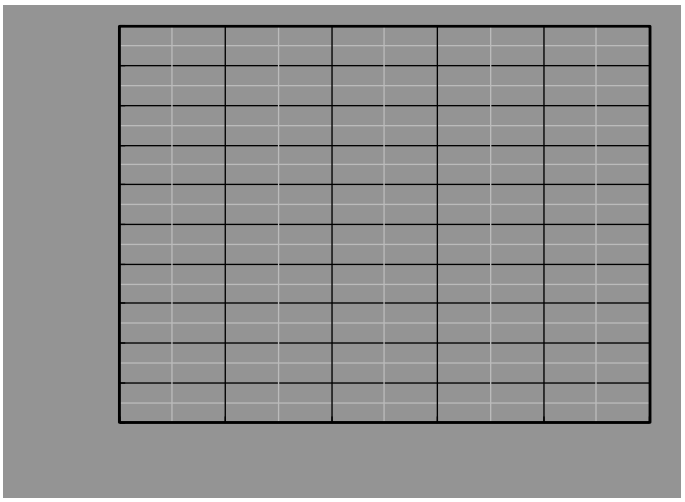
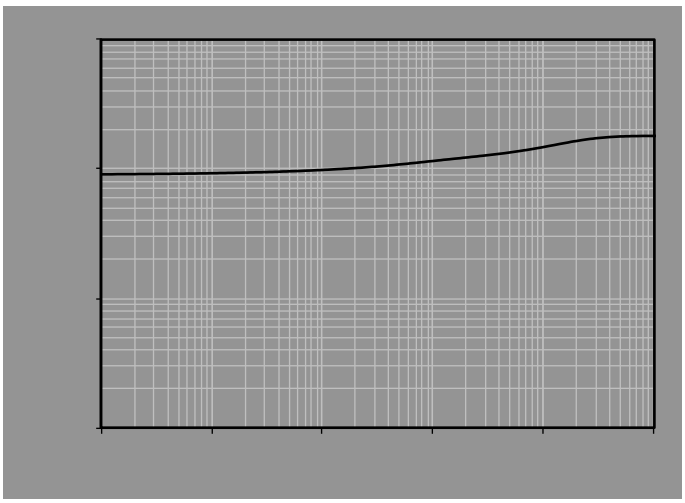


Figure 8. Forward characteristics of reverse diode



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