



N-Channel Enhancement Mode Field Effect Transistor

Product Summary

V_{DS}	30 V
I_D	12 A
$R_{DS(ON)}$ (at $V_{GS}= 10V$)	16 mohm
$R_{DS(ON)}$ (at $V_{GS}= 4.5V$)	30 mohm
100% UIS Tested	
100% V_{DS} Tested	

General Description

Trench Power LV MOSFET technology
Excellent package for heat dissipation
High density cell design for low $R_{DS(ON)}$

Applications

High current load applications
Load switching
Hard switched and high frequency circuits
Uninterruptible power supply

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}	$\pm 20=93 Td ()Tj ET E397v80 /P </MCID 8$	
Drain Current $T_C=25$	I		



YJQD12N03A

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

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V, I_D=250\mu A$	30			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=30V, V_{GS}=0V$			1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{GS}=\pm 20V, V_{DS}=0V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	1.0	1.5	2.5	V

$V_{GS}=10V, I_D=10A$

Static Drain-Source On-Resistance

R_{DS(on)}





Typical Performance Characteristics

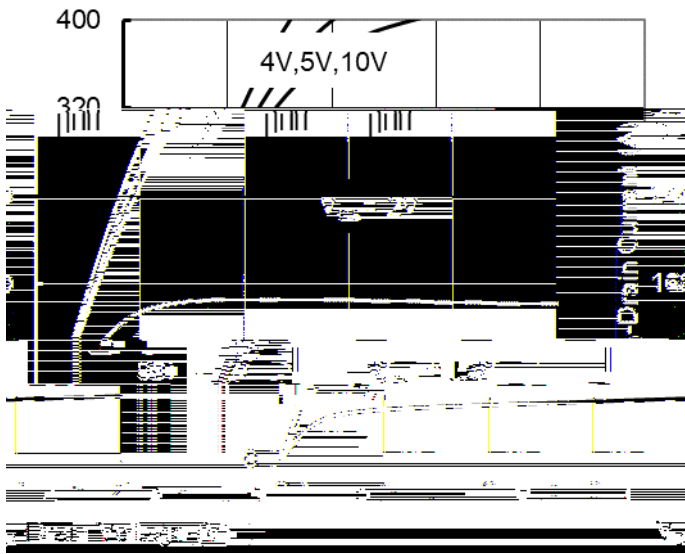


Figure 1. Output Characteristics

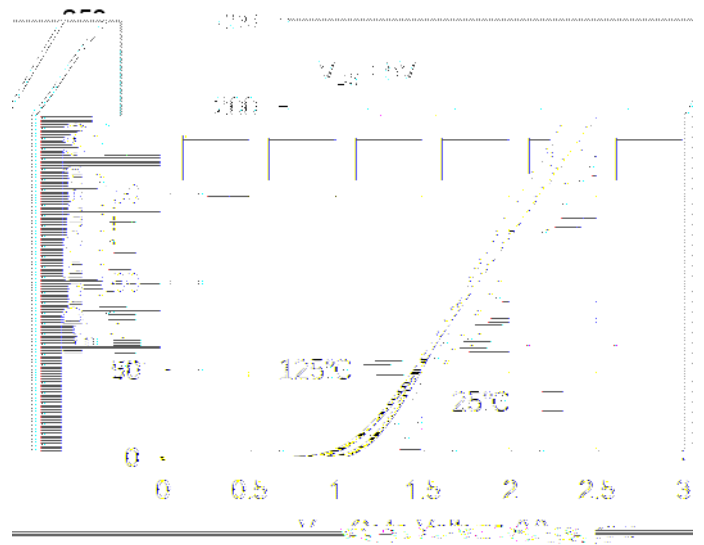


Figure 2. Transfer Characteristics

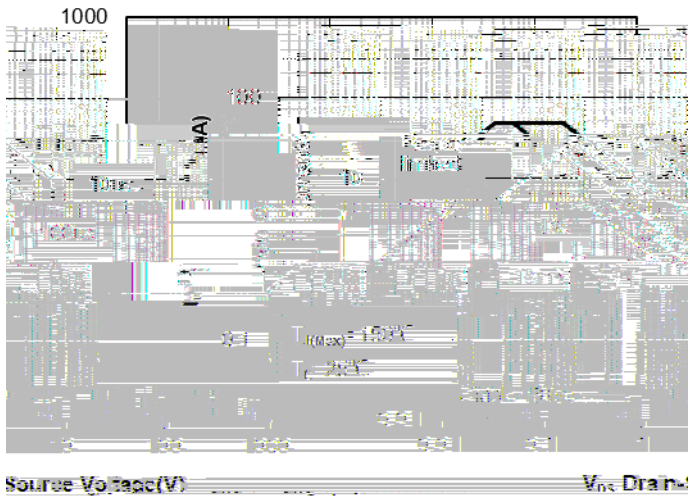


Figure 7. Safe Operation Area

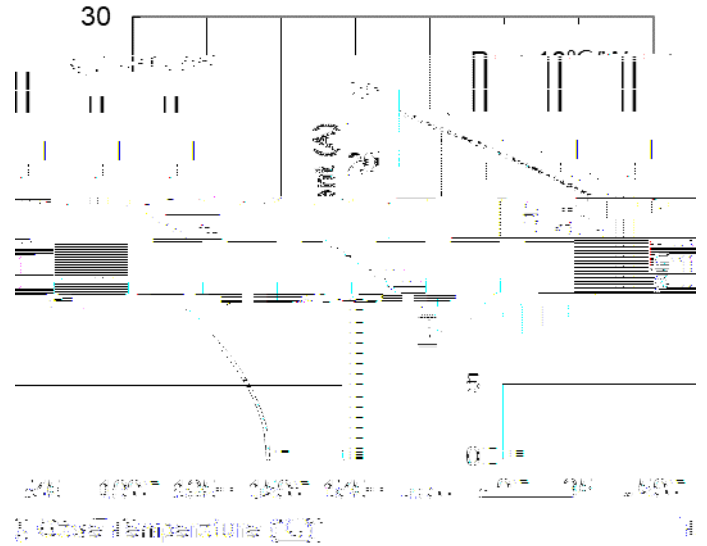
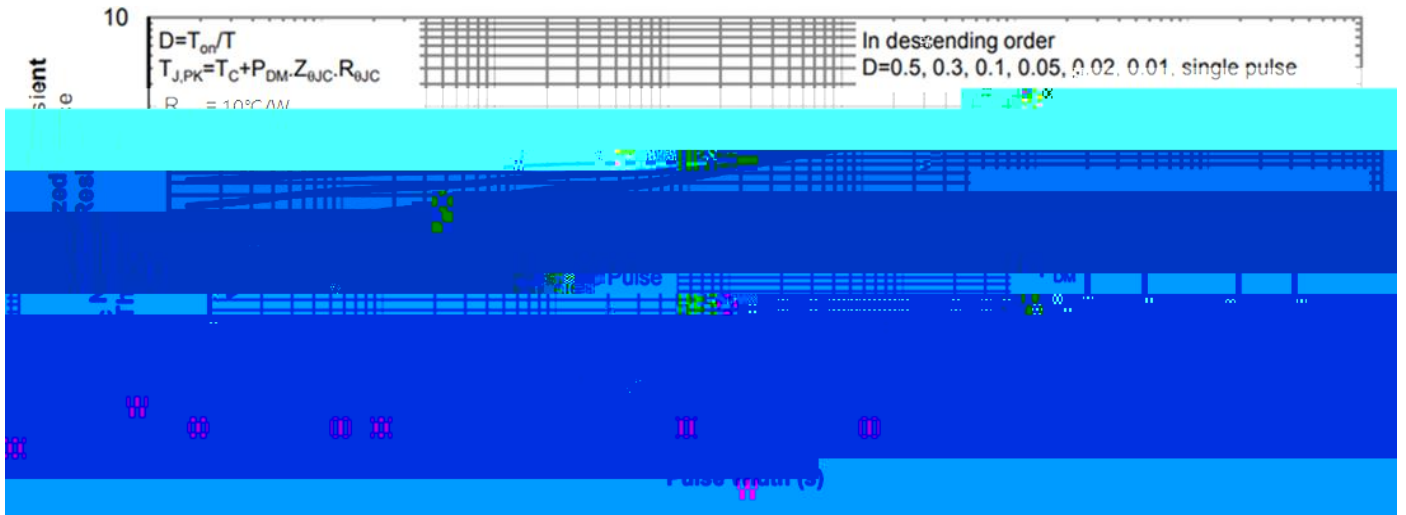


Figure 8. Maximum Continuous Drain Current vs Case Temperature





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