



# YJQ20N04AQ

## N-Channel Enhancement Mode Field Effect Transistor

### Product Summary

$V_{DS}$	40V
$I_D$	20A
$R_{DS(ON)}$ ( at $V_{GS}=10V$ )	15.0m
$R_{DS(ON)}$ ( at $V_{GS}=4.5V$ )	20.0m
100% EAS Tested	

### General Description

Excellent package for heat dissipation  
 High density cell design for low  $R_{DS(ON)}$   
 Part no. with suffix "Q" means AEC-Q101 qualified

### Applications

Power switching application  
 Uninterruptible power supply  
 DC-DC convertor  
 12V Automotive systems

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

Parameter		Symbol	Limit	Unit
Drain-source Voltage		$V_{DS}$	40	V
Gate-source Voltage		$V_{GS}$	$\pm 20$	V
Drain Current	$T_C=25$	$I_D$	20	A
	$T_C=100$		17	
Pulsed Drain Current <sup>A</sup>		$I_{DM}$	80	A
Avalanche energy <sup>B</sup>		EAS	40	mJ
Total Power Dissipation <sup>C</sup>	$T_A=25$	$P_D$	2.2	W
	$T_C=25$		21	
Thermal Resistance Junction-to-Case	Steady-State	$R_{JC}$	5.9	/W J
		$T_{STG}$	-55 +150	

### Ordering Information (Example)

PREFERRED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJQ20N04AQ	F1	Q20N04	5000	10000	100000	13" reel



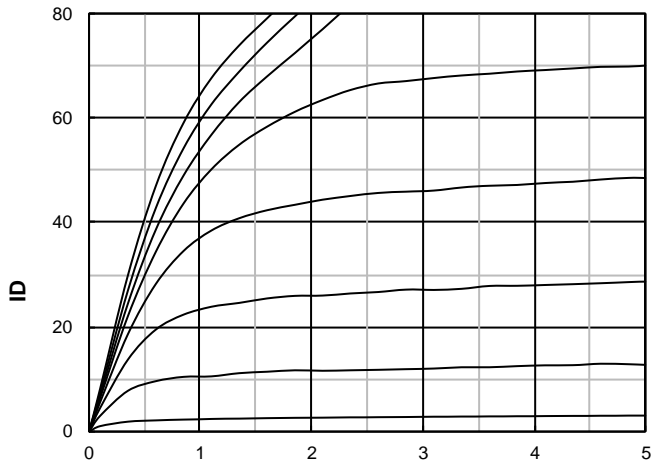
## YJQ20N04AQ

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

Parameter	Symbol	Conditions	Min	Typ	Max	Units
-----------	--------	------------	-----	-----	-----	-------



Typical Electrical and Thermal Characteristics Diagrams





# YJQ20N04AQ

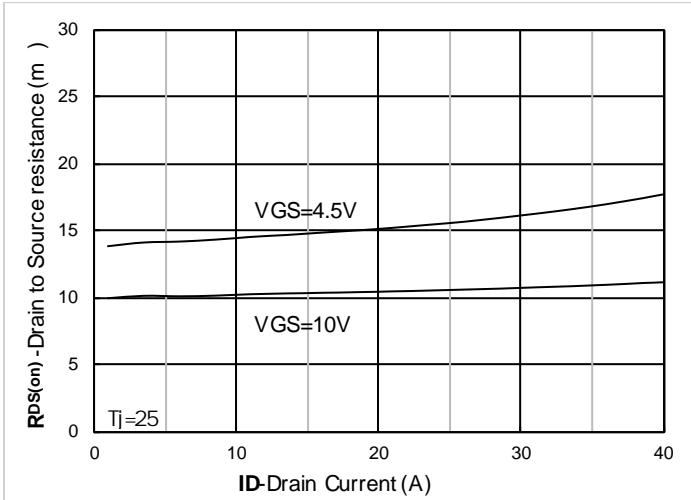


Figure 7.  $R_{DS(on)}$  VS Drain Current

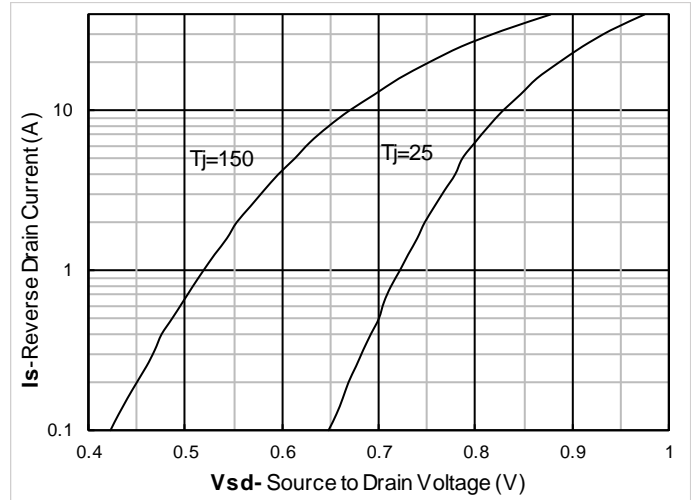
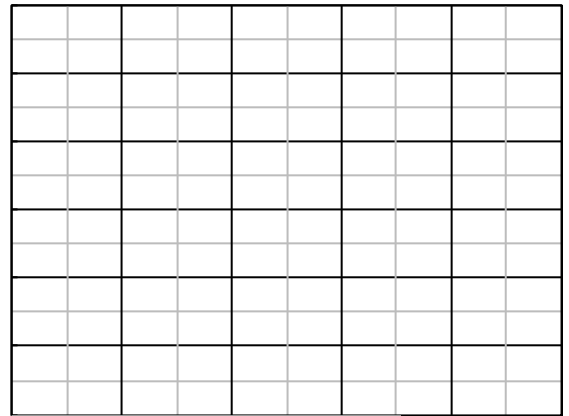
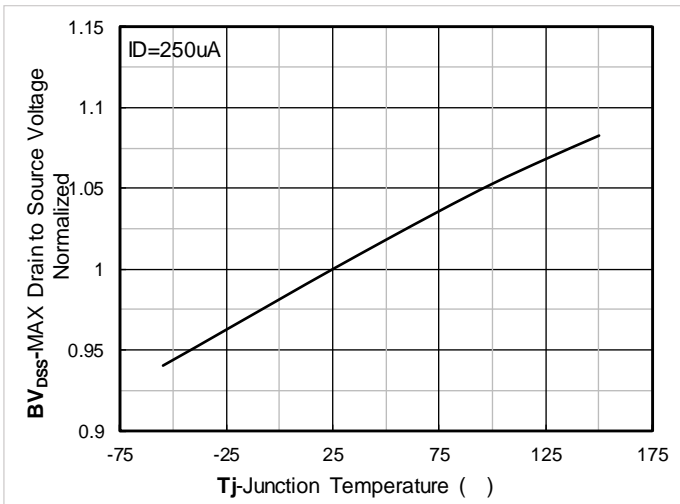


Figure 8. Forward characteristics of reverse diode



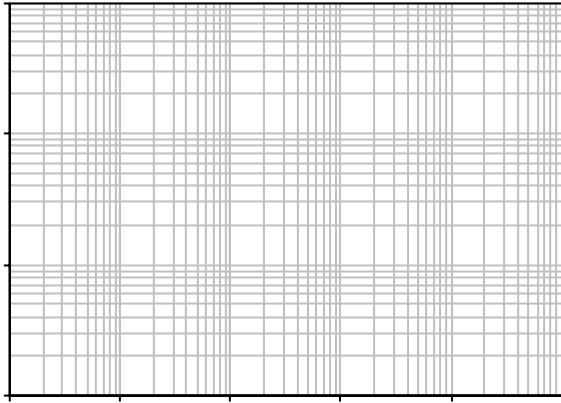


Figure 13. Maximum Transient Thermal Impedance

Figure 14. Safe Operation Area





**Disclaimer**

The information presented in this document is for reference onl

