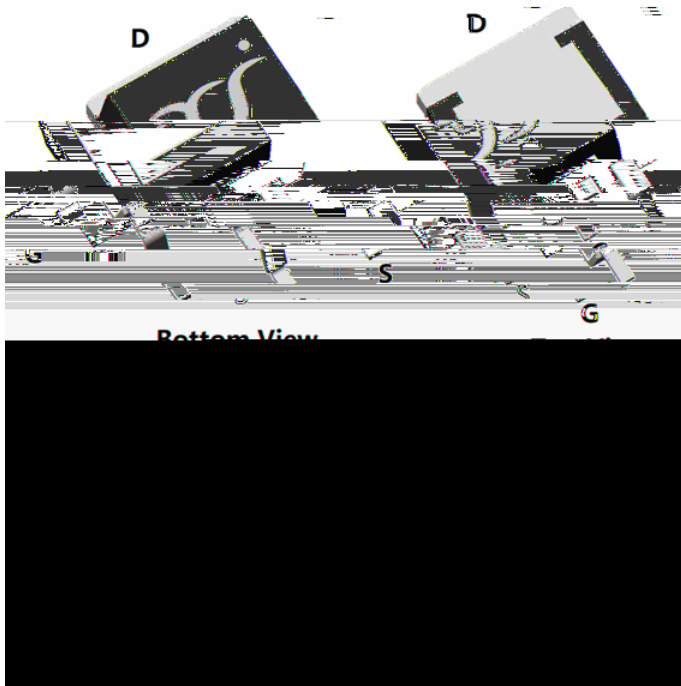




N-Channel Enhancement Mode Field Effect Transistor



Product Summary

• V_{DS}	60V
• I_D	200A
• $R_{DS(ON)}$ (at $V_{GS}=10V$)	3.2 mohm
• $R_{DS(ON)}$ (at $V_{GS}=4.5V$)	4.5 mohm
• 100% EAS Tested	
• 100% V_{DS} Tested	

General Description

- Excellent package for heat dissipation
- High density cell design for low $R_{DS(ON)}$
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free
- Part no. with suffix "•"

Parameter		Symbol	Limit	Unit
Drain-source Voltage		V_{DS}	60	V
Gate-source Voltage		V_{GS}	± 20	V
Drain Current ^A	$T_A=25$	I_D	23	A
	$T_A=100$		15	
	$T_C=25$		200	
	$T_C=100$		125	
Pulsed Drain Current ^B		I_{DM}	600	A
Avalanche energy ^C		EAS	600	mJ
Total Power Dissipation ^D	$T_A=25$	P_D	4.3	W
	$T_A=100$		1.7	
	$T_C=25$		260	
	$T_C=100$		104	
Junction and Storage Temperature Range		T_J, T_{STG}	-55 +150	



■Thermal resistance

Parameter	Symbol	
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YJB200G06CQ

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

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V, I_D=250\mu A$	60			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=60V, V_{GS}=0V$			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	1.6	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=20A$		2.5	3.2	m Ω
		$V_{GS}=4.5V, I_D=15A$		3	4.5	
Diode Forward Voltage	V_{SD}	$I_S=20A, V_{GS}=0V$			1.2	V



■ Typical Performance Characteristics

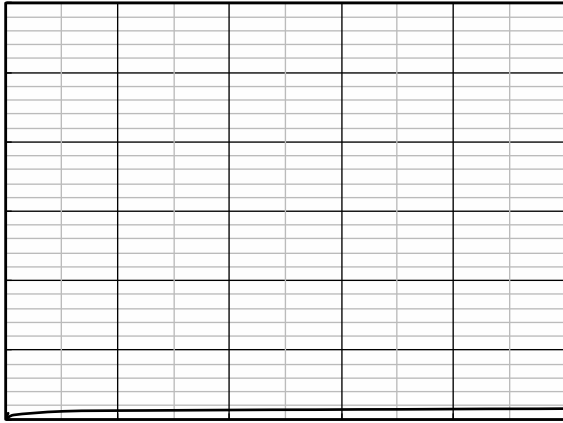


Figure1. Output Characteristics

Figure2. Transfer Characteristics

Figure3. Capacitance Characteristics

Figure4. Gate Charge

Figure 5. On-Resistance vs Gate to Source Voltage

Figure 6. Normalized On-Resistance

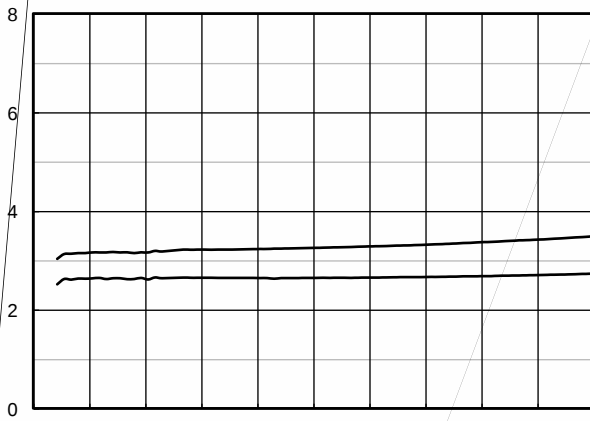


Figure 7. $R_{DS(on)}$ VS Drain Current

Figure 8. Forward characteristics of reverse diode

Figure 9. Normalized breakdown voltage

Figure 10. Normalized Threshold voltage

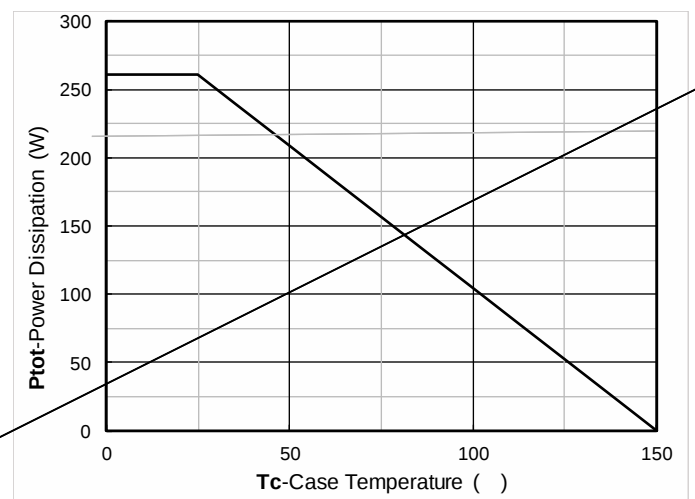
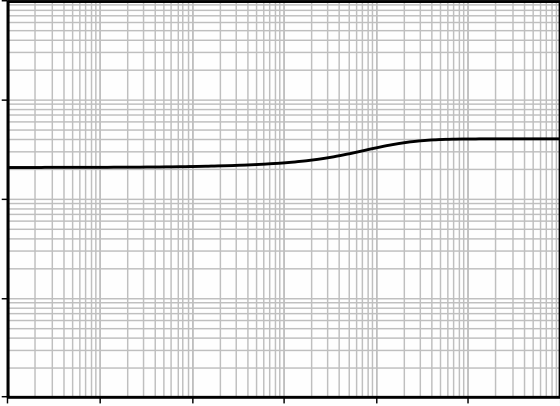


Figure 11. Current dissipation

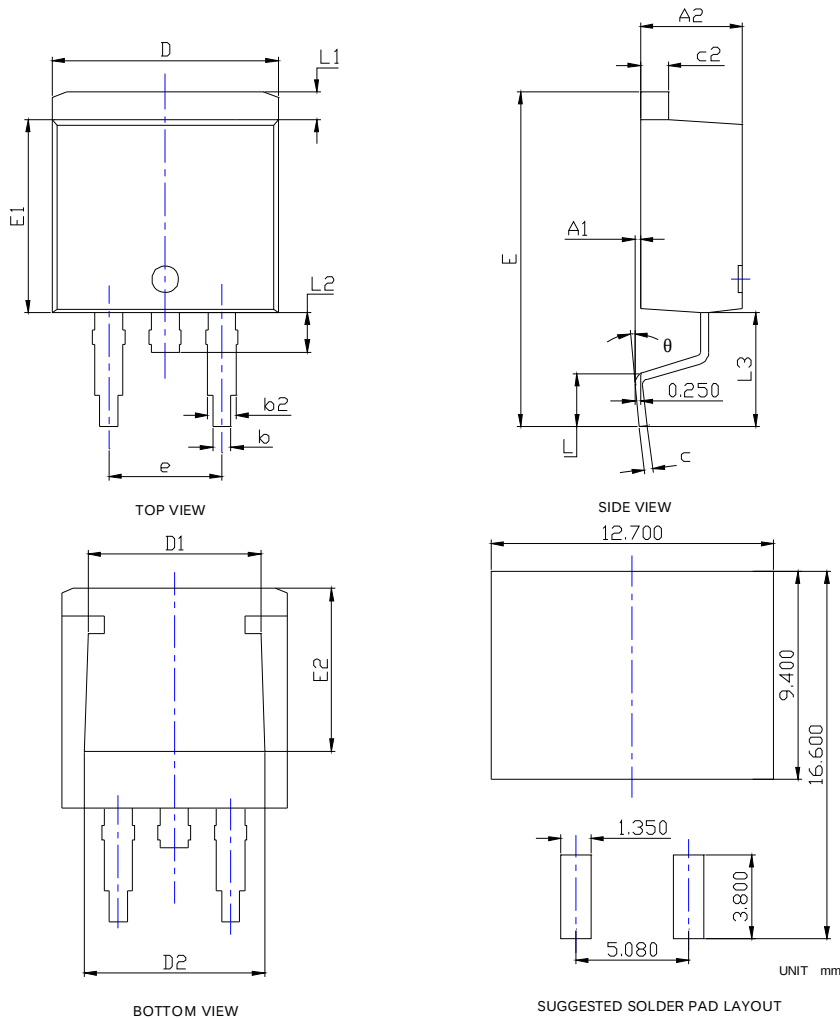
Figure 12. Power dissipation





YJB200G06CQ

■ TO-263-HY Package information



SYMBOL	DIMENSIONS					
	INCHES			Millimeter		
	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.
A1	0.000	---	0.010	0.000	---	0.250
A2	0.174	0.180	0.186	4.430	4.580	4.730
b	0.028	0.032	0.036	0.720	0.820	0.920
b2	0.046	0.050	0.054	1.180	1.280	1.380
c	0.013	0.015	0.018	0.330	0.390	0.450
c2	0.048	0.050	0.053	1.220	1.280	1.340
D	0.394	0.400	0.406	10.000	10.150	10.300
D1	0.295	0.307	0.319	7.500	7.800	8.100
D2	0.303	0.315	0.327	7.700	8.000	8.300
E	0.571	0.591	0.610	14.500	15.000	15.500
E1	0.337	0.341	0.348	8.550	8.700	8.850
E2	0.276	0.287	0.299	7.000	7.300	7.600
e	0.200BSC			5.080BSC		
L	0.070	---	0.110	1.790	---	2.790
L1	0.044	---	0.056	1.120	---	1.420
L2	0.030	---	0.070	0.770	---	1.770
L3	0.197REF			5.000REF		
θ	0°	---	8°	0°	---	8°

NOTE:

1. PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS.
2. TOLERANCE 0.1mm UNLESS OTHERWISE SPECIFIED.
3. THE PAD LAYOUT IS FOR REFERENCE PURPOSES ONLY.



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