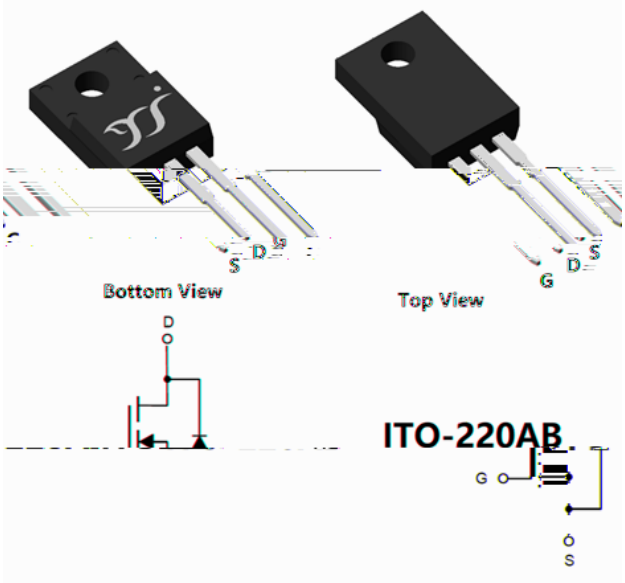
N-Channel Enhancement Mode Field Effect Transistor



Product Summary

- V_{DS} 650V
- I_D 20A
- $R_{DS(ON)}$(at V_{GS}=10V) 190mΩ
- 100% EAS Tested
- 100% V_{DS} Tested

General Description

- Excellent package for heat dissipation
- High density cell design for low $R_{DS(ON)}$
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free

Applications

- Power switching application
- Uninterruptible power supply
- DC-DC convertor

■ Limiting Values

Parameter	Conditions		Symbol	Min	Max	Unit
Drain-source Voltage			V_{DS}	-	650	V
Gate-source Voltage			V_{GS}	-30	30	
Continuous Drain Current (Note 1,2)	Steady-State	T_A=25 ,V_{GS}=10V	I_D	-	2	A
		T_A=100 ,V_{GS}=10V		-	1.2	
Continuous Drain Current (Note 1,3)	Steady-State	T_C=25 ,V_{GS}=10V		-	20	
		T_C =100 ,V_{GS}=10V		-	12.6	
Pulsed Drain Current	T_C=25 ,t_p≤10μs		I_{DM}	-	42	
Maximum Body-Diode Continuous Current	T_C=25		I_S		20	
Maximum Body-Diode Pulsed Current	T_C=25 ,t_p≤10μs		I_{SM}	-	42	
Avalanche Energy (non-repetitive)	T_J=25 ,V_G=10V,R_G=25Ω,L=30mH,IAS=4.19A		EAS	-	263.34	mJ
Total Power Dissipation (Note 1,2)	Steady-State	T_A=25	P_D	-	1.95	W
		T_A=100		-	0.78	
Total Power Dissipation (Note 1,3)	Steady-State	T_C=25		-	54	
		T_C =100		-	21	
Insulation withstand voltage	Vrms, t=60s		V_{ISO}	-	3	KV
Junction and Storage Temperature Range			T_J ,T_{STG}	-55	150	

■Thermal Resistance

Parameter		Symbol	Typ	Max	Units
Thermal Resistance Junction-to-Ambient (Note 2)	Steady-State	$R_{\theta JA}$	-	64	/W
Thermal Resistance Junction-to-Case	Steady-State	$R_{\theta JC}$	-	2.3	

■ Ordering Information (Example)

PREFERED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJF190C65BHJ	B1	YJF190C65B	50	/	5000	Tube

■Typical Electrical and Thermal Characteristics Diagrams

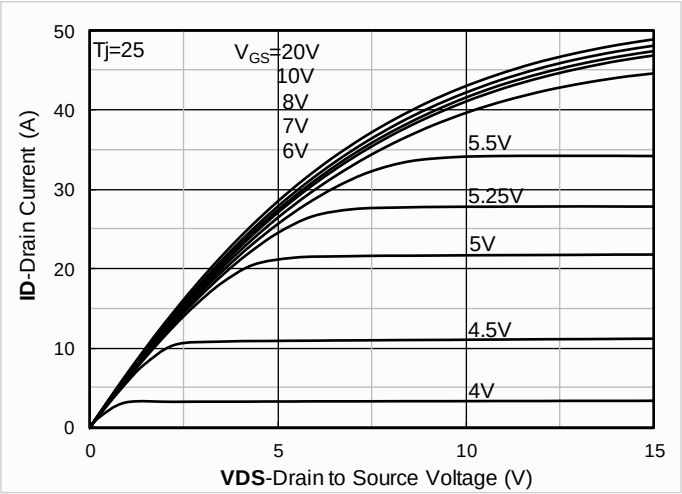


Figure 1. Output Characteristics; typical values

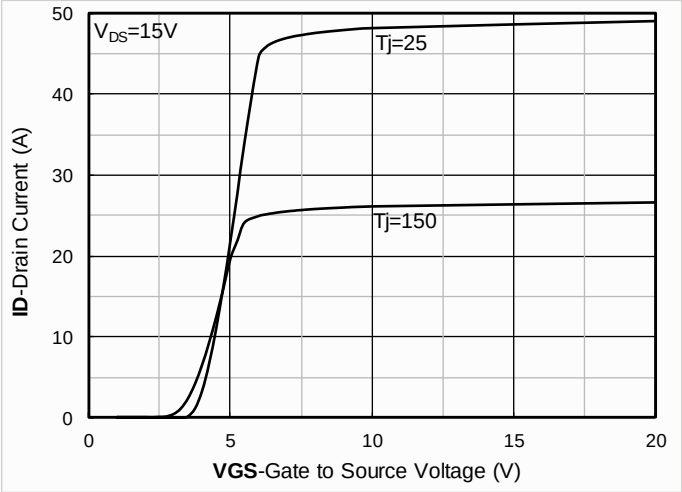
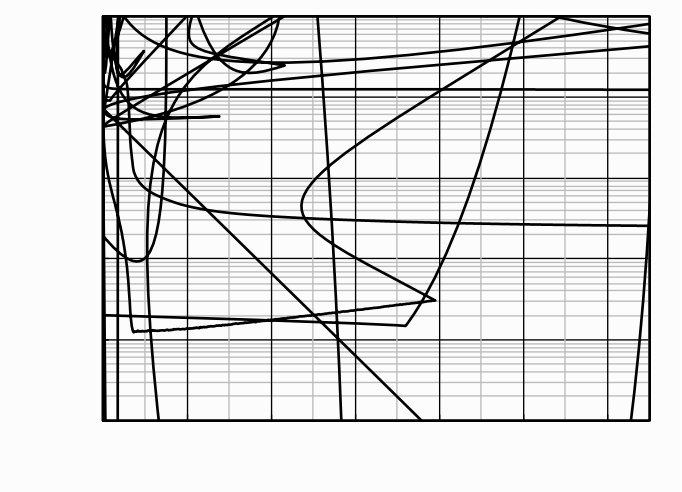


Figure 2. Transfer Characteristics; typical values



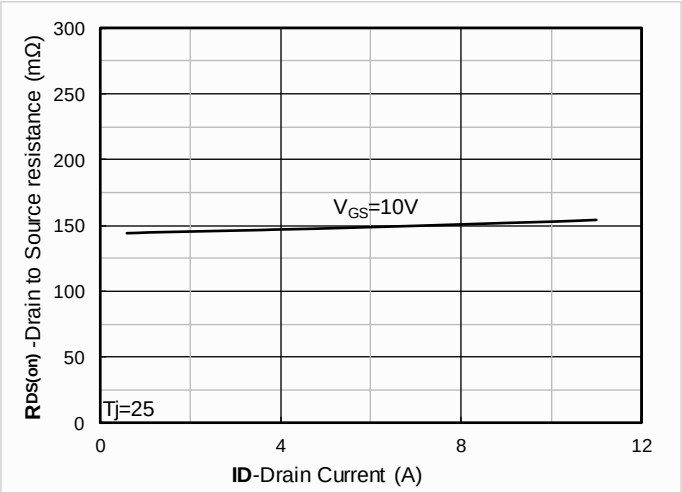


Figure 7. $R_{DS(on)}$ vs. Drain Current; typical values

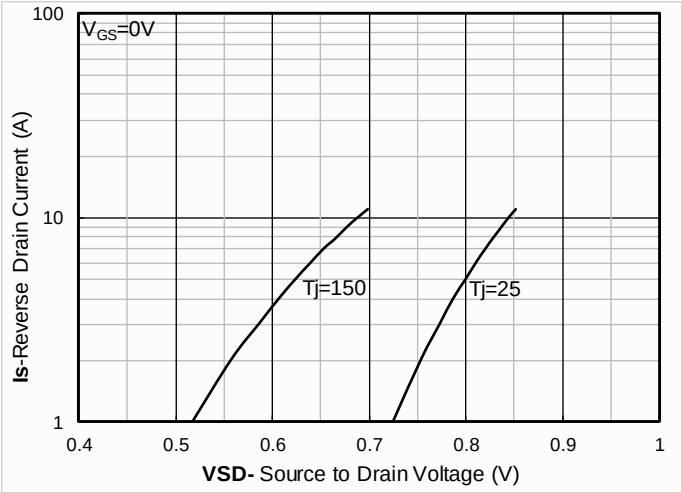


Figure 8. Forward characteristics of reverse diode; typical values

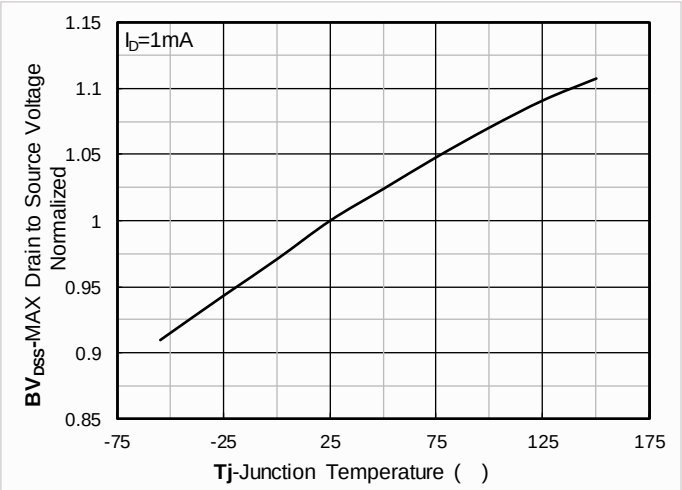


Figure 9. Normalized breakdown voltage

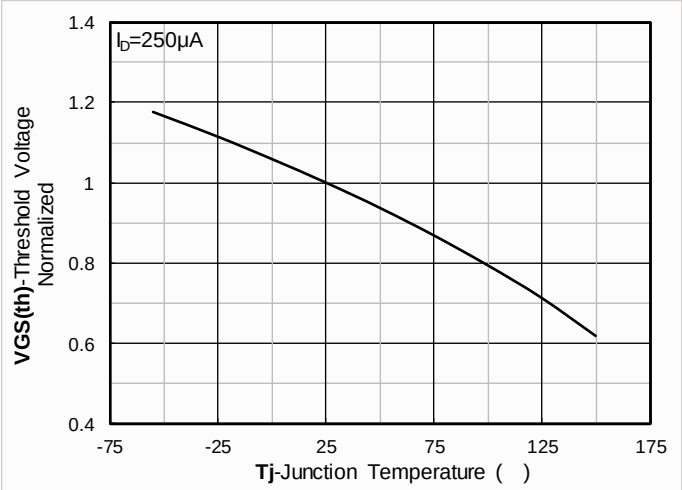


Figure 10. Normalized Threshold voltage

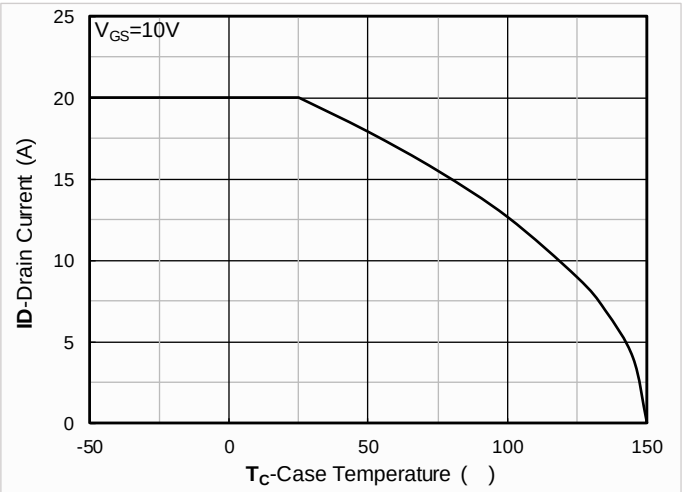


Figure 11. Current dissipation

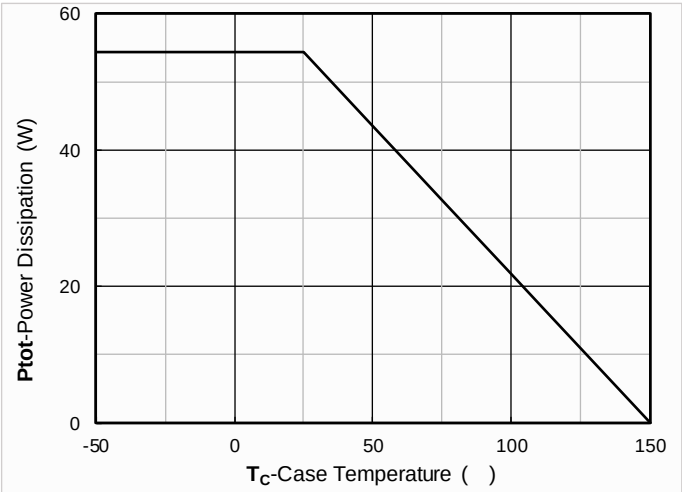


Figure 12. Power dissipation

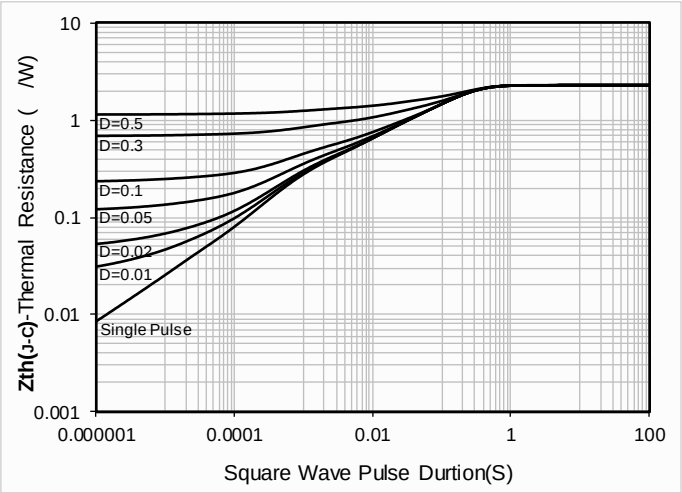


Figure 13. Maximum Transient Thermal Impedance

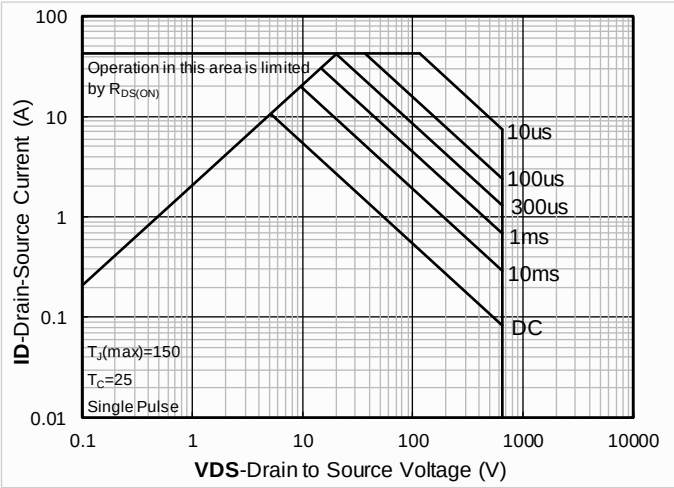


Figure 14. Safe Operation Area

■ Test Circuits & Waveforms

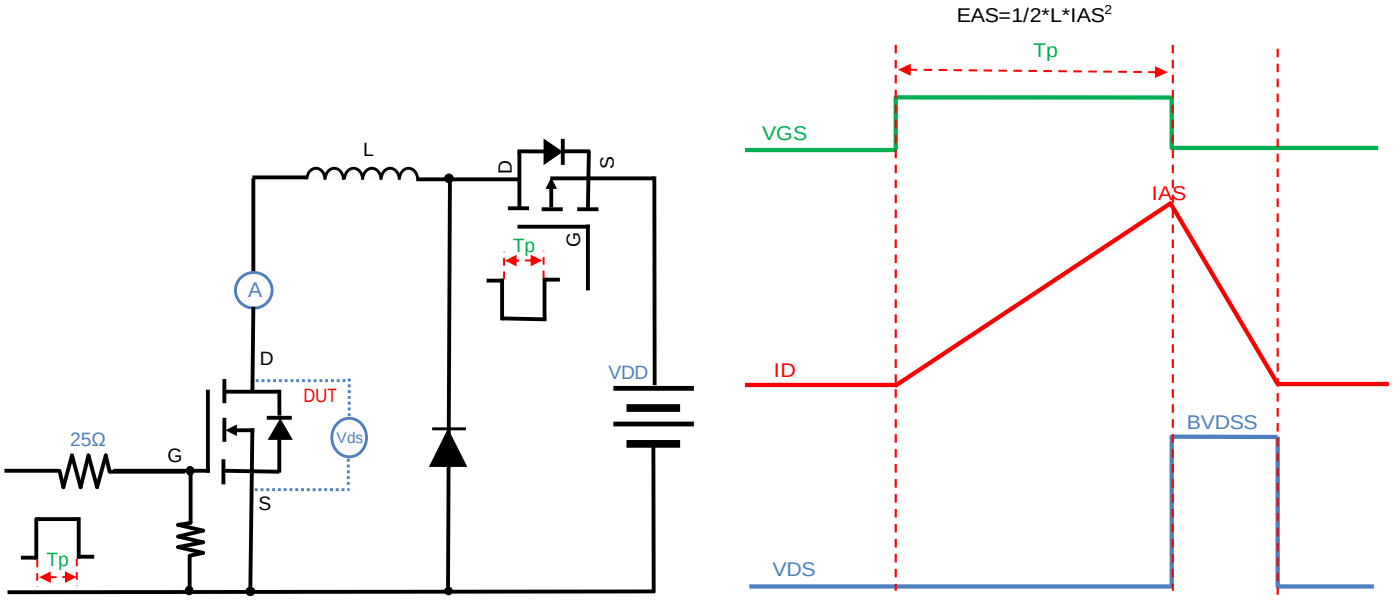
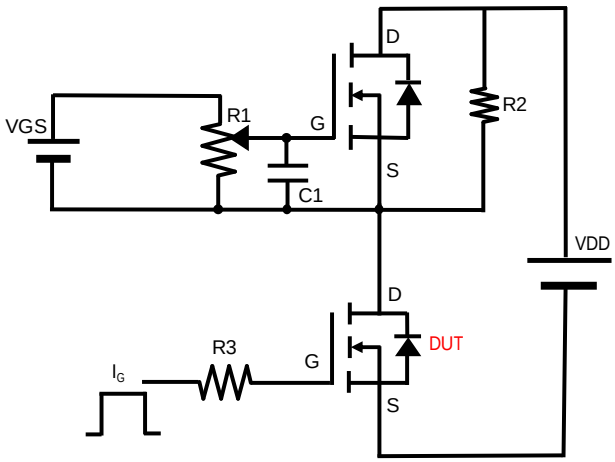


Figure A. Unclamped Inductive Switching (UIS) Test Circuit & Waveform



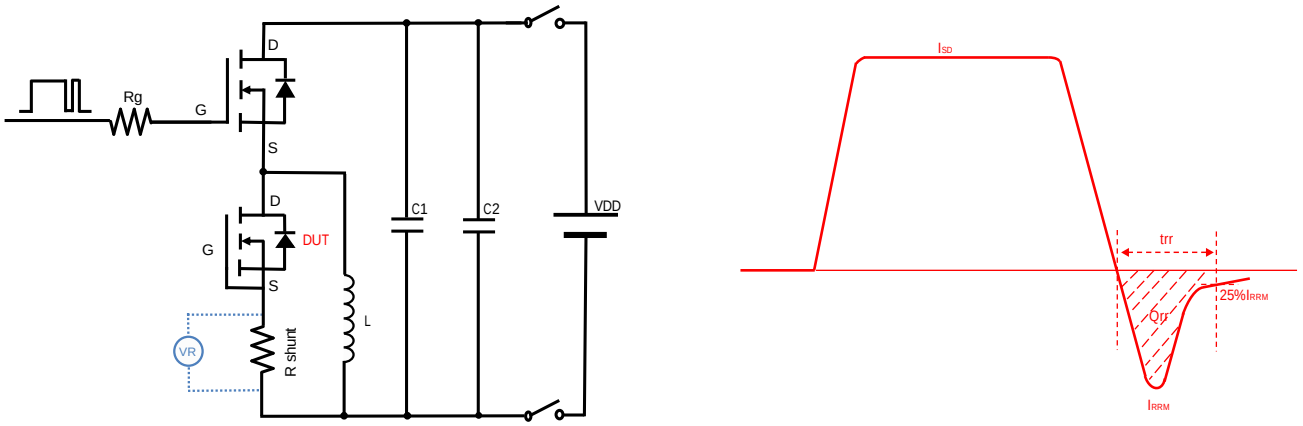
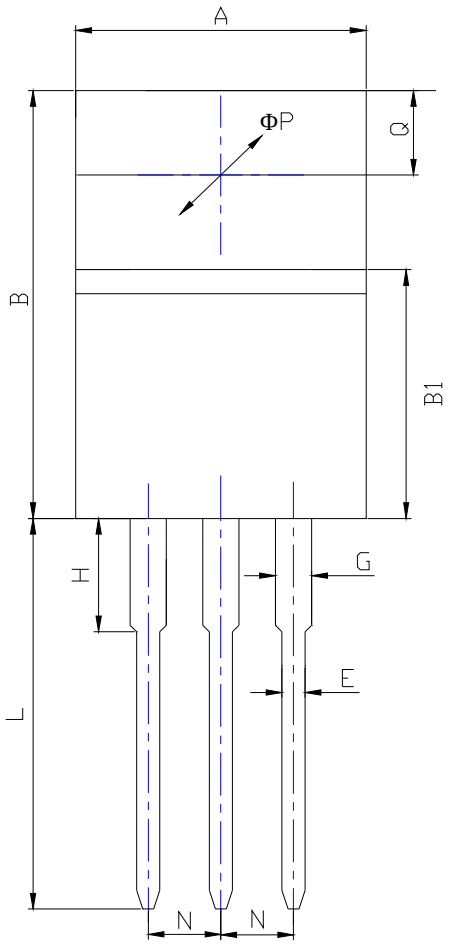
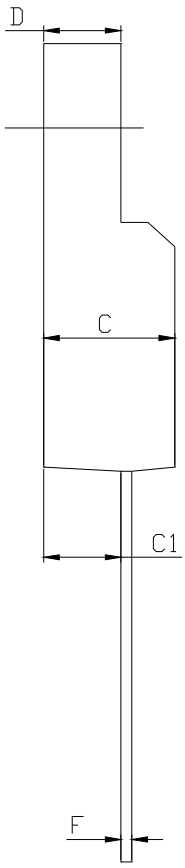


Figure D. Diode Recovery Test Circuit & Waveform

■ ITO-220AB-C Package information



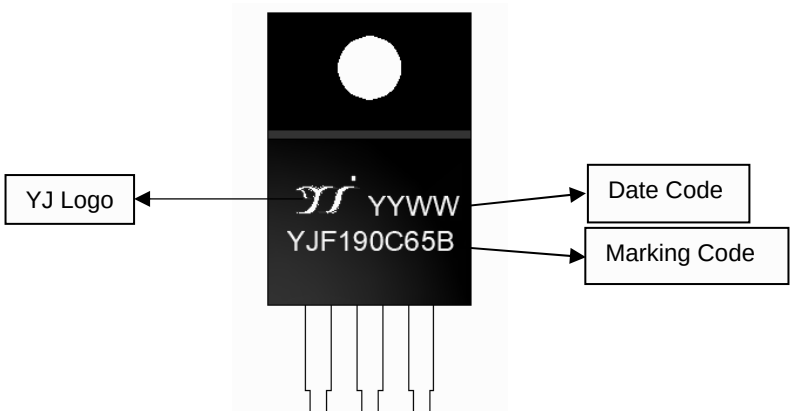
TOP VIEW



SIDE VIEW

SYM	MIN.
B	
C	
C1	
D	
H	
L	
N	

■ Marking Information



Note
1. All marking is at middle of the product body
2. All marking is in laser printing
3. YJF190C65B is marking code, YYWW is date code, "YY" is year, "WW" is week
4. Body color: Black

Disclaimer

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The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

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