



ESD



TVS



MOS



LDO



Diode



Sensor



DC-DC

Product Specification

▶ Domestic	Part Number	IRFB4332
▶ Overseas	Part Number	IRFB4332
▶ Equivalent	Part Number	IRFB4332



N-Channel MOSFET

General Description

This IRFB4332 is produced using advanced planar stripe DMOS technology. This advanced technology has been especially tailored to minimize on-state resistance, provide superior switching performance, and withstand high energy pulse in the avalanche and commutation mode. These devices are well suited for high efficient switched mode power supplies and active power factor correction.

Features

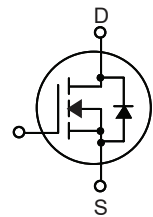
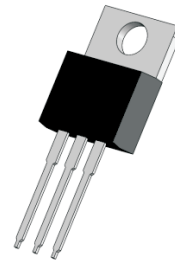
- 100% avalanche tested
- Improved dv/dt capability
- RoHS Compliant

Product Summary

BVDSS	R _{DS(on)} max.	ID
250V	77mΩ	55A

Applications

- Switching applications
- Synchronous Rectification



Absolute Maximum Ratings

Symbol	Parameter	220/263/262	220F	Units
V _{DS}	Drain-Source Voltage	250		V
V _{GS}	Gate-Source Voltage	±30		V
I _D @T _C =25°C	Continuous Drain Current	55	55*	A
I _D @T _C =100°C	Continuous Drain Current	38	38*	A
I _{DM}	Pulsed Drain Current	220	220*	A
EAS	Single Pulse Avalanche Energy (Note 1)	2102		mJ
P _D @T _C =25°C	Total Power Dissipation	200	45	W
T _{STG}	Storage Temperature Range	-55 to 150		°C
T _J	Operating Junction Temperature Range	-55 to 150		°C

* Drain current limited by maximum junction temperature.

Thermal Data

Symbol	Parameter	220/263/262	220F	Unit
R _{θJA}	Thermal Resistance Junction-ambient Max.	62	62	°C/W
R _{θJC}	Thermal Resistance Junction-case Max.	0.62	2.78	°C/W

Electrical Characteristics (T_J=25°C , unless otherwise noted)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V , I _D =250uA	250	---	---	V
R _{DS(ON)}	Static Drain-Source On-Resistance	V _{GS} =10V , I _D =25A	---	69	77	mΩ
V _{GS(th)}	Gate Threshold Voltage	V _{GS} =V _{DS} , I _D =250μA	2	---	4	V
I _{DSS}	Drain-Source Leakage Current	V _{DS} =250V , V _{GS} =0V	---	---	1	uA
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±30V , V _{DS} =0V	---	---	±100	nA
g _{fs}	Forward Transconductance	V _{DS} =10V , I _D =25A	---	32	---	S
R _g	Gate Resistance	V _{DS} =0V , V _{GS} =0V , f=1MHz	---	1	---	Ω
Q _g	Total Gate Charge	V _{DS} =200V , I _D =50A V _{GS} =10V	---	76	---	nC
Q _{gs}	Gate-Source Charge		---	20	---	
Q _{gd}	Gate-Drain Charge		---	25	---	
T _{d(on)}	Turn-On Delay Time	V _{DS} =125V , V _{GS} =10V , I _D =50A R _G =25Ω	---	55	---	ns
T _r	Rise Time		---	50	---	
T _{d(off)}	Turn-Off Delay Time		---	212	---	
T _f	Fall Time		---	31	---	
C _{iss}	Input Capacitance	V _{DS} =25V , V _{GS} =0V , f=1MHz	---	4000	---	pF
C _{oss}	Output Capacitance		---	400	---	
C _{rss}	Reverse Transfer Capacitance		---	35	---	

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I _S	Diode continuous forward current	V _G =V _D =0V , Force Current	---	---	55	A
I _{S,pulse}	Diode pulse current		---	---	220	A
V _{SD}	Diode Forward Voltage	V _{GS} =0V , I _F =25A , T _J =25 °C	---	0.87	1.4	V

Note :

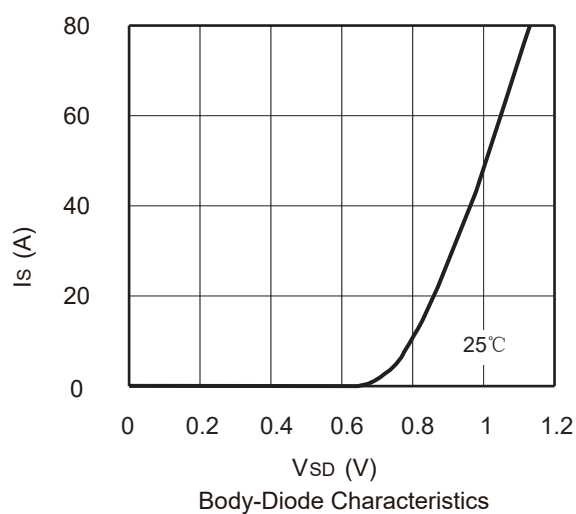
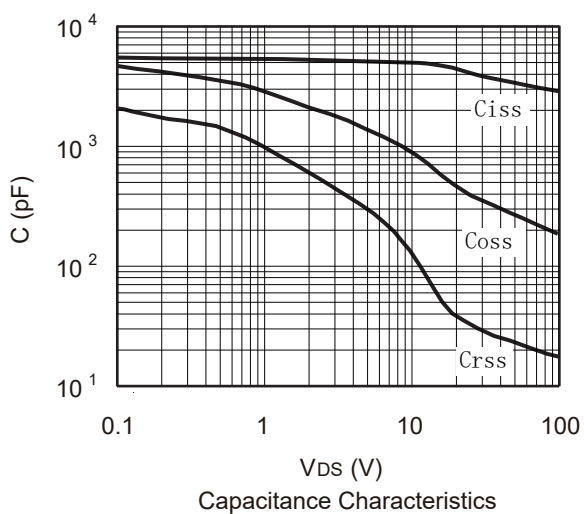
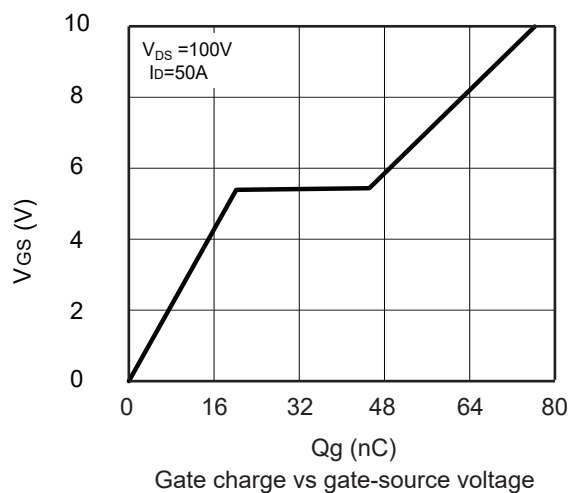
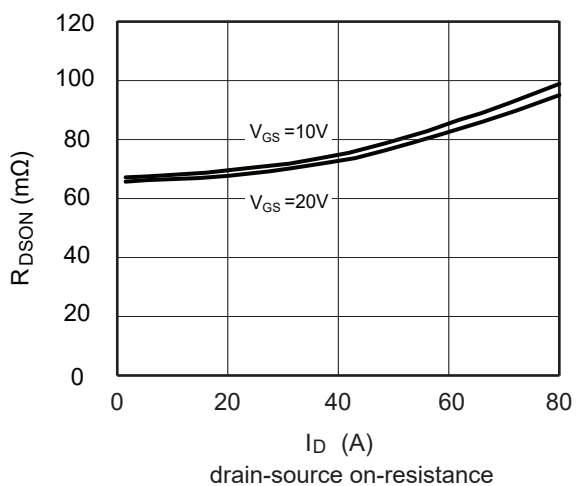
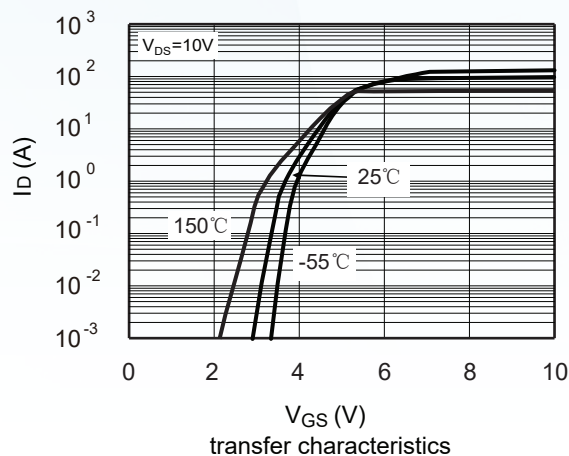
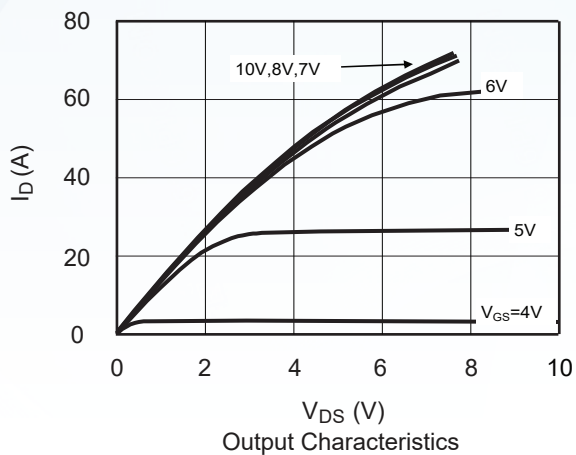
1.The EAS data shows Max. rating .The test condition is V_{DS}=80V , V_{GS}=10V , L=5mH , I_{AS}=29A.

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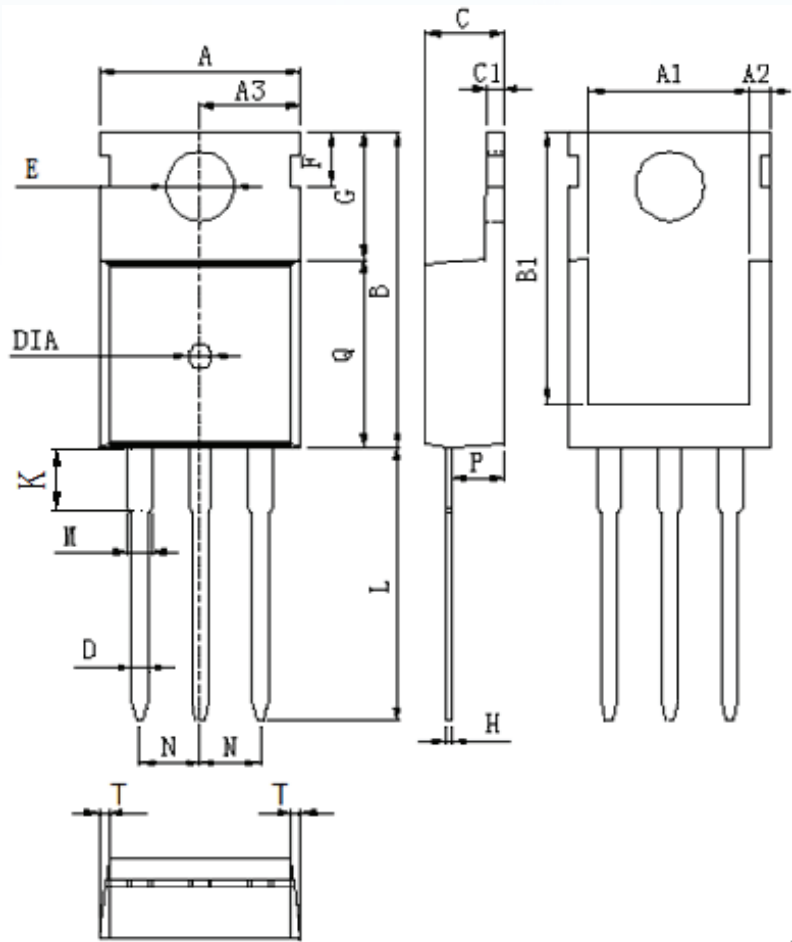
Typical Characteristics



Package Dimension

TO-220

Unit :mm



DIM	MILLIMETERS
A	10.0±0.3
A1	8.64±0.2
A2	1.15±0.1
A3	5.0±0.2
B	15.8±0.4
B1	13.2±0.3
C	4.56±0.1
C1	1.3±0.2
D	0.8±0.2
E	3.6±0.2
F	2.95±0.3
G	6.5±0.3
H	0.5±0.1
K	3.1±0.2
L	13.2±0.4
M	1.25±0.1
N	2.54±0.1
P	2.4±0.3
Q	9.0±0.3
T	W:0.35
DIA	⌀1.5 (deep 0.2)

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