RECTRON SEMICONDUCTOR

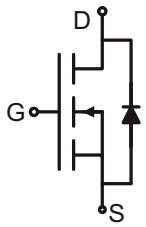
RI2N60

N-CHANNEL MOSFET in a TO-251 Package.

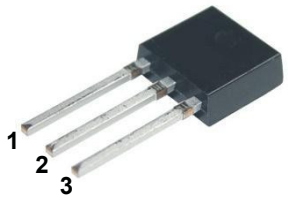
Description

Low gate charge, low crss, fast switching.

These devices are well suited for high efficiency switching DC/DC converters and switch mode power



Schematic diagram



PIN1: G PIN 2: D PIN 3: S

TO-251 Pin assignment

Package Marking and Ordering Information

Package Type	Units					Dimension (unit :mm^3)		
	Units/Tube	Tubes/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Tube	Inner Box	Outer Box
TO-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180

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Absolute Maximum Ratings(Ta=25°C)

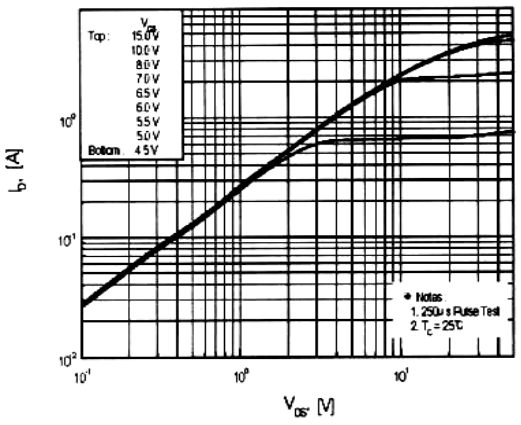
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	600	V
Drain Current	I_D(Tc=25°C)	2.0	A
Drain Current	I_D(Tc=100°C)	1.3	A
Drain Current - Pulsed	I_{DM}	6.0	A
Gate-Source Voltage	V_{GSS}	±30	V
Single Pulsed Avalanche Energy	E_{AS}	120	mJ
Repetitive Avalanche Energy	E_{AR}	5.4	mJ
Avalanche Current	I_{AR}	2.0	A
Power Dissipation	P_D(Tc=25°C)	45	W
Operating and Storage Temperature Range	T_J,T_{STG}	-55 to 150	°C

Electrical Characteristics(Ta=25°C)

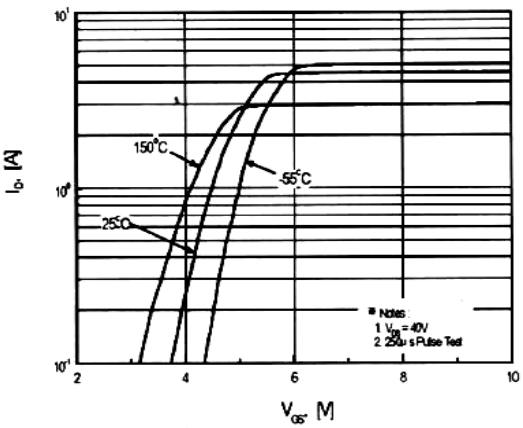
Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V	I_D=250μA	600			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=600V	V_{GS}=0V			1.0	μA
		V_{DS}=480V	T_C=125°C			100	μA
Gate-Body Leakage Current, Forward	I_{GSS}	V_{GS}=±30V	V_{DS}=0V			±0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}	I_D=250μA	2.0		4.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V	I_D=1.0A		4.0	5.0	Ω
Forward Transconductance	g_{FS}	V_{DS}=40V	I_D=1.0A		2.05		S
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS}=0V	I_S=2.0A			1.4	V
Input Capacitance	C_{iss}	V_{DS}=25V f=1.0MHz	V_{GS}=0V		320	420	pF
Output Capacitance	C_{oss}				35	46	pF
Reverse Transfer Capacitance	C_{rss}				4.5	6.0	pF
Turn-On Delay Time	$t_{d(on)}$	V_{DD}=300V R_G=25Ω	I_D=2.0A		8.0	30	ns
Turn-On Rise Time	t_r				23	60	ns
Turn-Off Delay Time	$t_{d(off)}$				25	60	ns
Turn-Off Fall Time	t_f				28	70	ns

Electrical Characteristic Curve

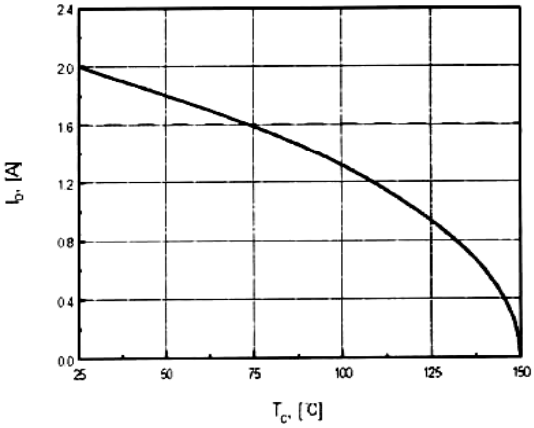
ID - VDS



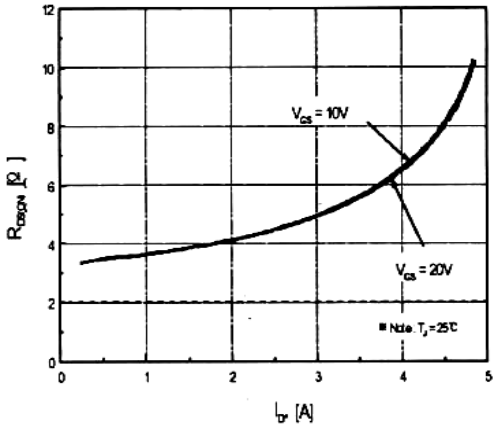
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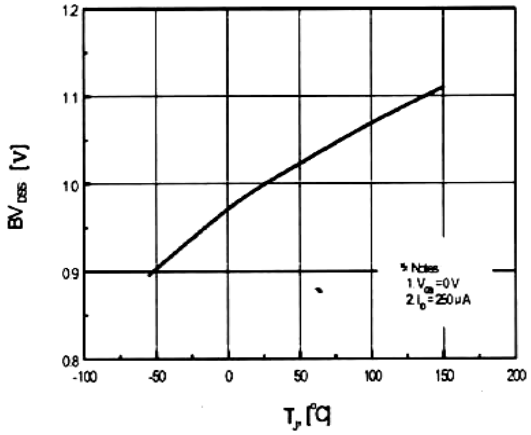
ID - TC



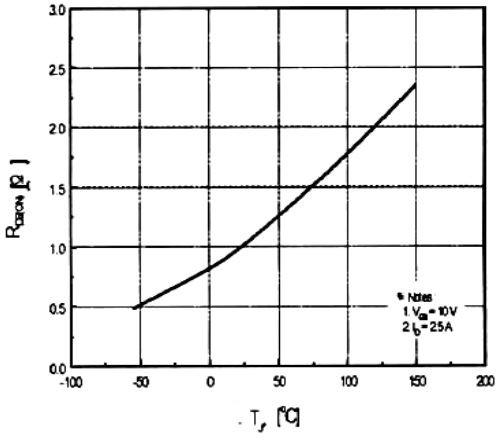
RDS(ON) - ID



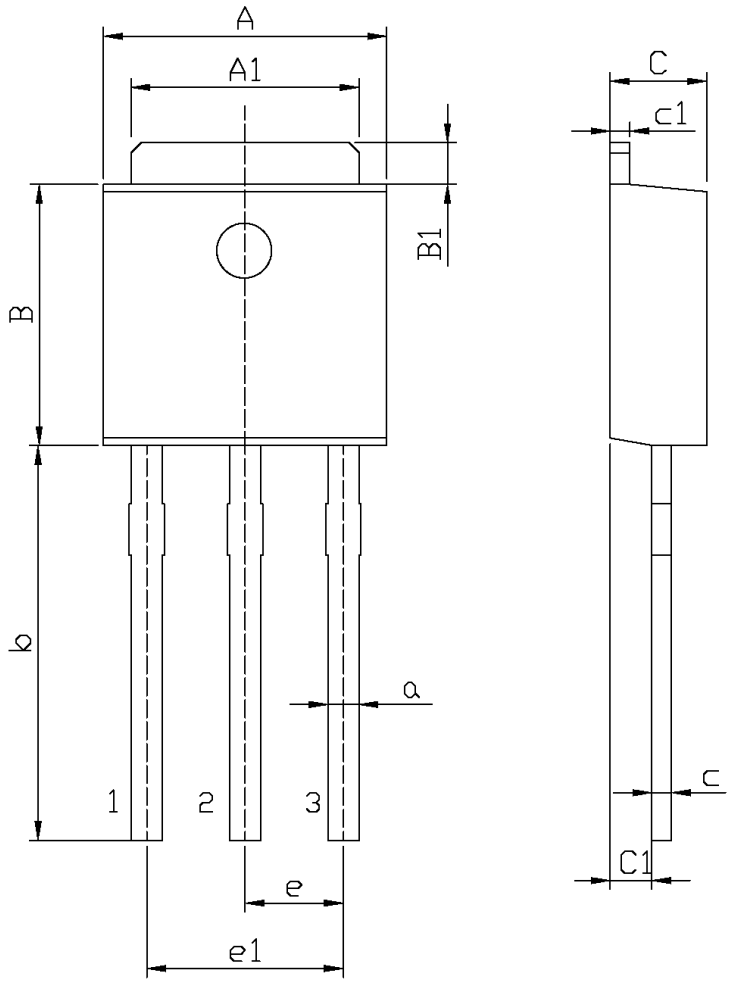
BVDSS - TJ



RDS(ON) - TJ



Package Dimensions



mm

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	6.45	6.75	a	0.50	0.70
A1	5.10	5.50	b	9.00	9.40
B	5.95	6.25	c	0.45	0.55
B1	0.95	1.25	c1	0.45	0.55
C	2.20	2.40	e	2.24	2.34
C1	0.95	1.15	e1	4.43	4.73

TO-251

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