/ Descriptions

TO-251 N MOS N-CHANNEL MOSFET in a TO-251 Plastic Package.

/ Features

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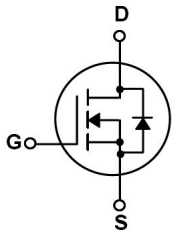
Low gate charge, low crss, fast switching.

/ Applications

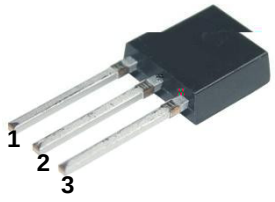
DC/DC

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

/ Equivalent Circuit



/ Pinning



PIN1 G PIN 2 D PIN 3 S

/ h_{FE} Classifications & Marking

See Marking Instructions.

/ Absolute Maximum Ratings(Ta=25)

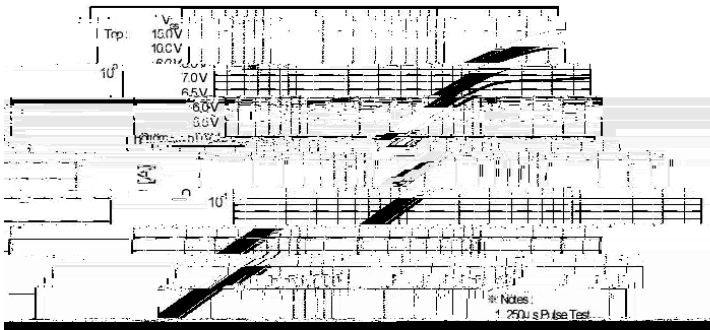
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	600	V
Drain Current	I_D(Tc=25)	1.0	A
Drain Current	I_D(Tc=100)	0.6	A
Drain Current - Pulsed	I_{DM}	3.0	A
Gate-Source Voltage	V_{GSS}	±30	V
Single Pulsed Avalanche Energy	E_{AS}	50	mJ
Repetitive Avalanche Energy	E_{AR}	2.8	mJ
Avalanche Current	I_{AR}	1.0	A
Power Dissipation	P_D(Tc=25)	30	W
Operating and Storage Temperature Range	T_J,T_{STG}	-55 to 150	

/ Electrical Characteristics(Ta=25)

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			10	μA
		V_{DS}=480V	T_C=125			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=0.5A		9.7	12	Ω
Forward Transconductance	g_{FS}	V_{DS}=40V	I_D=0.5A		0.97		S
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS}=0V	I_S=1.0A			1.4	V
Input Capacitance	C_{iss}	V_{DS}=25V f=1.0MHz	V_{GS}=0V		155	200	pF
Output Capacitance	C_{oss}				20	26	pF
Reverse Transfer Capacitance	C_{rss}				3.0	4.0	pF
Turn-On Delay Time	$t_{d(on)}$	V_{DD}=300V R_G=50Ω	I_D=1.2A		10	30	ns
Turn-On Rise Time	t_r				20	50	ns
Turn-Off Delay Time	$t_{d(off)}$				16	45	ns
Turn-Off Fall Time	t_f				25	60	ns

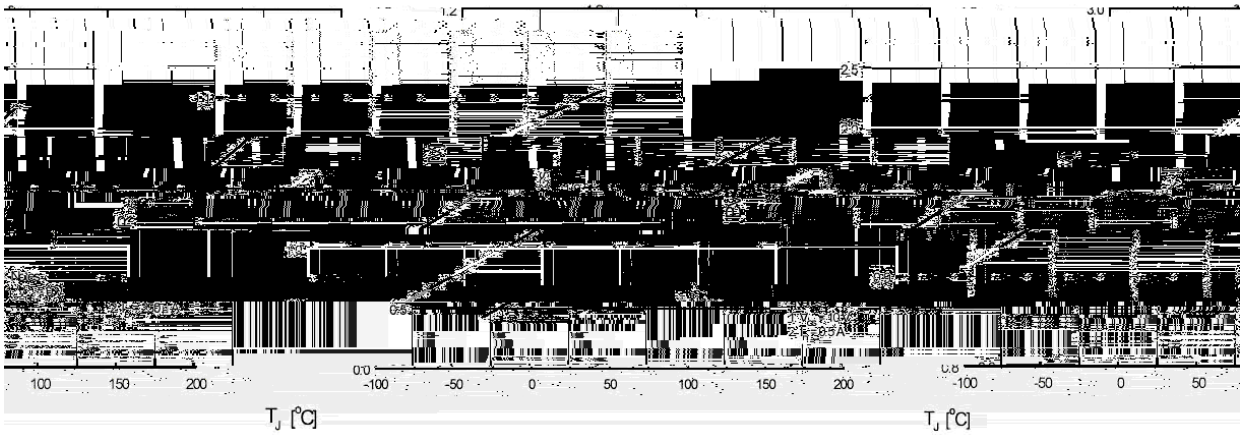
/ Electrical Characteristic Curve

$I_D - V_{DS}$



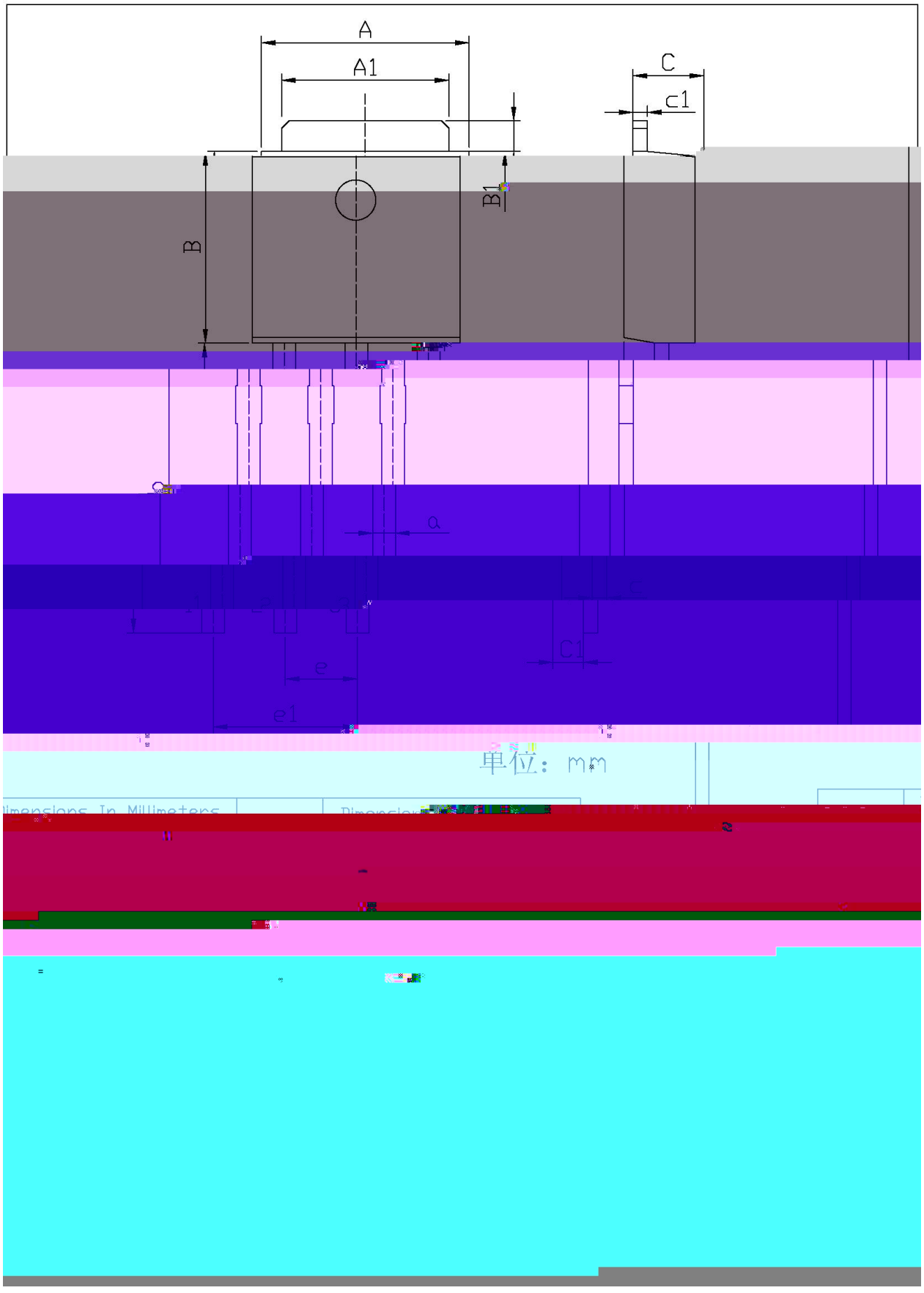
$I_D - V_{GS}$

$R_{DS(ON)} - T_J$

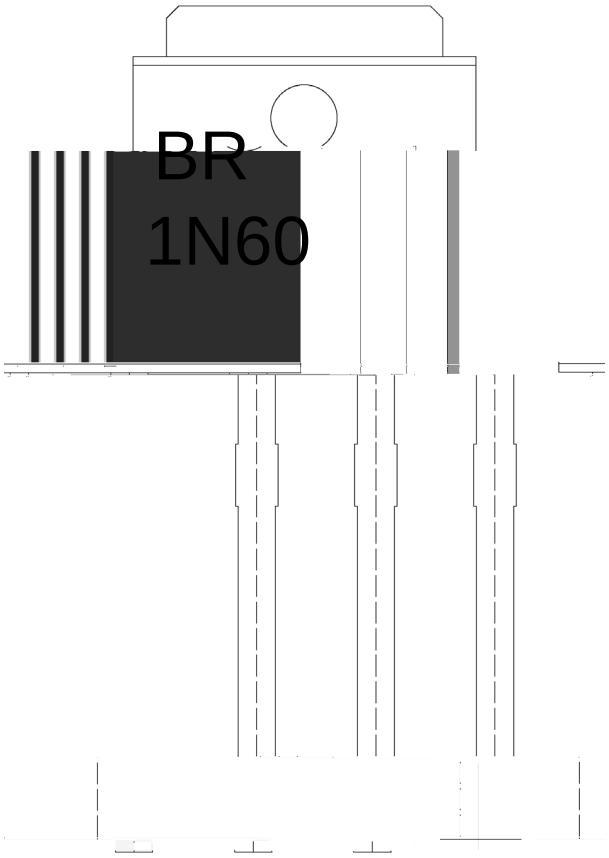


$BV_{DSS} - T_J$

/ Package Dimensions



/ Marking Instructions



BR

1N60

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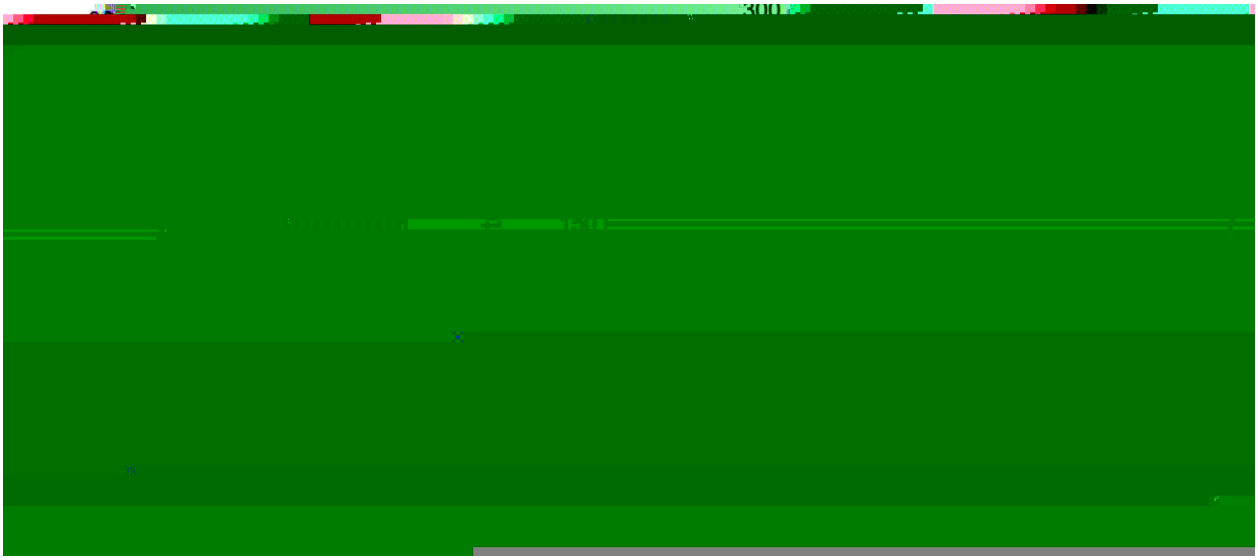
Note:

BR:	Company Code
1N60:	Product Type.
****:	Lot No. Code, code change with Lot No.

( ) / Temperature Profile for Dip Soldering(Pb-Free)



				Note:
1	25 150	60	90sec;	1.Preheating:25~150 , Time:60~90sec.
2	255±5		5±0.5sec;	2.Peak Temp.:255±5 , Duration:5±0.5sec.
3		2 10	/sec.	3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

270±5	10±1 sec.	Temp.:270±5	Time:10±1 sec

/ Packaging SPEC.

/ BULK

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm^3)		
	只 袋	袋 盒	只 盒	盒 箱	只 箱	袋	盒	箱

/ TUBE

Package Type 封装形式	Units 包装数量	Dimension 包装尺寸 (unit: mm^3)
	只 套管	