/ Descriptions

TO-252 N MOS
N-CHANNEL MOSFET in a TO-252 Plastic Package.

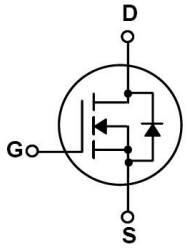
/ Features

, ,
Low gate charge, low crss, fast switching, HF Product.

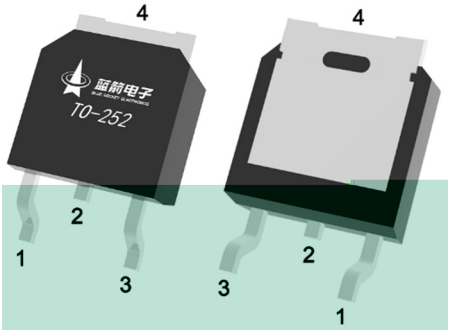
/ Applications

These devices are well suited for power switch circuit of adaptor and charger.

/ Equivalent Circuit



/ Pinning



PIN1 G PIN 2 D PIN 3 S PIN 4 D

/ Marking

See Marking Instructions.

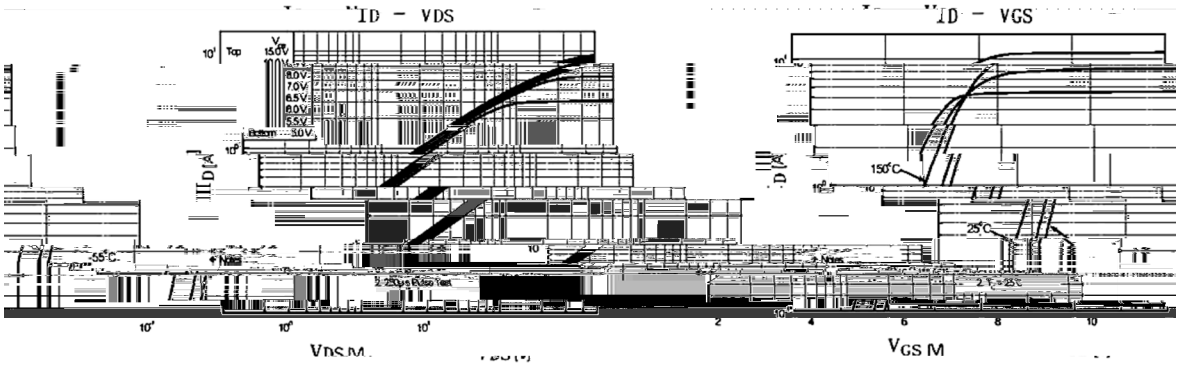
/ Absolute Maximum Ratings(Ta=25)

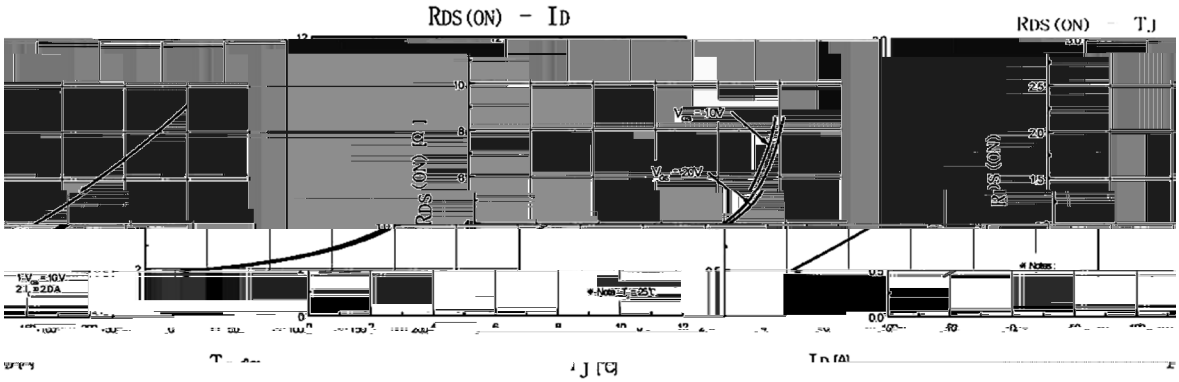
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	650	V
Drain Current	I_D(Tc=25)	4.0	A
Drain Current	I_D(Tc=100)	3.2	A
Drain Current - Pulsed	I_{DM}	16	A
Gate-Source Voltage	V_{GSS}	±30	V
Single Pulsed Avalanche Energy	E_{AS}	150	mJ
Repetitive Avalanche Energy	E_{AR}	30	mJ
Avalanche Current	I_{AR}	2.5	A
Power Dissipation	P_D(Tc=25)	75	W
Operating and Storage Temperature Range	T_J,T_{STG}	-55 to 150	
Junction to Ambient	$R_{\theta JA}$	100	/W
Junction to Case	$R_{\theta JC}$	1.7	/W

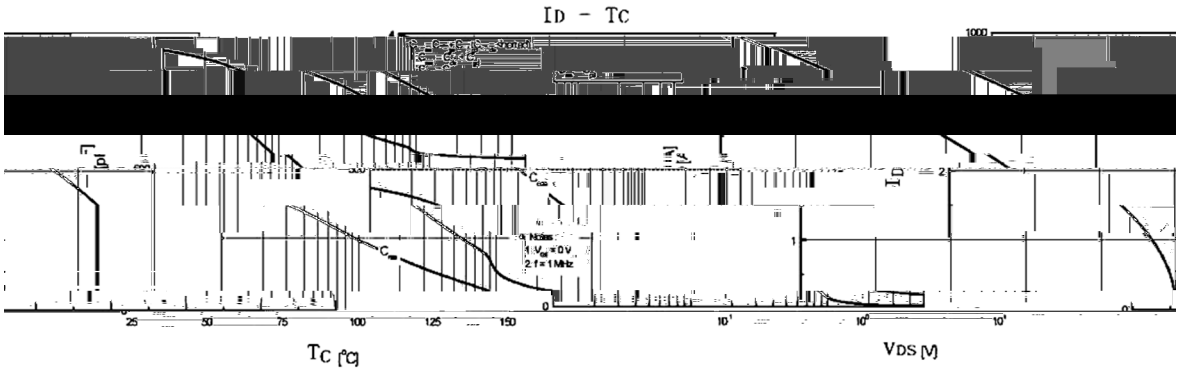
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=250μA	650			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=650V V_{GS}=0V			1	μA
		V_{DS}=520V T_C=125			100	μA
Gate-Body Leakage Current Forward	I_{GSS}	V_{GS}=±30V V_{DS}=0V			±100	nA
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=2.0A		2.4	2.7	Ω
Forward Transconductance	g_{FS}	V_{DS}=15V I_D=2.0A		3.5		S
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS}=0V I_S=4.0A			1.5	V
Input Capacitance	C_{iss}	V_{DS}=25V V_{GS}=0V f=1.0MHz		560		pF
Output Capacitance	C_{oss}			50		pF
Reverse Transfer Capacitance	C_{rss}			2.2		pF
Turn-On Delay Time	$t_{d(on)}$	V_{DD}=325V I_D=4.0A R_G=10Ω		14		ns
Turn-On Rise Time	t_r			22		ns
Turn-Off Delay Time	$t_{d(off)}$			29		ns
Turn-Off Fall Time	t_f			15		ns

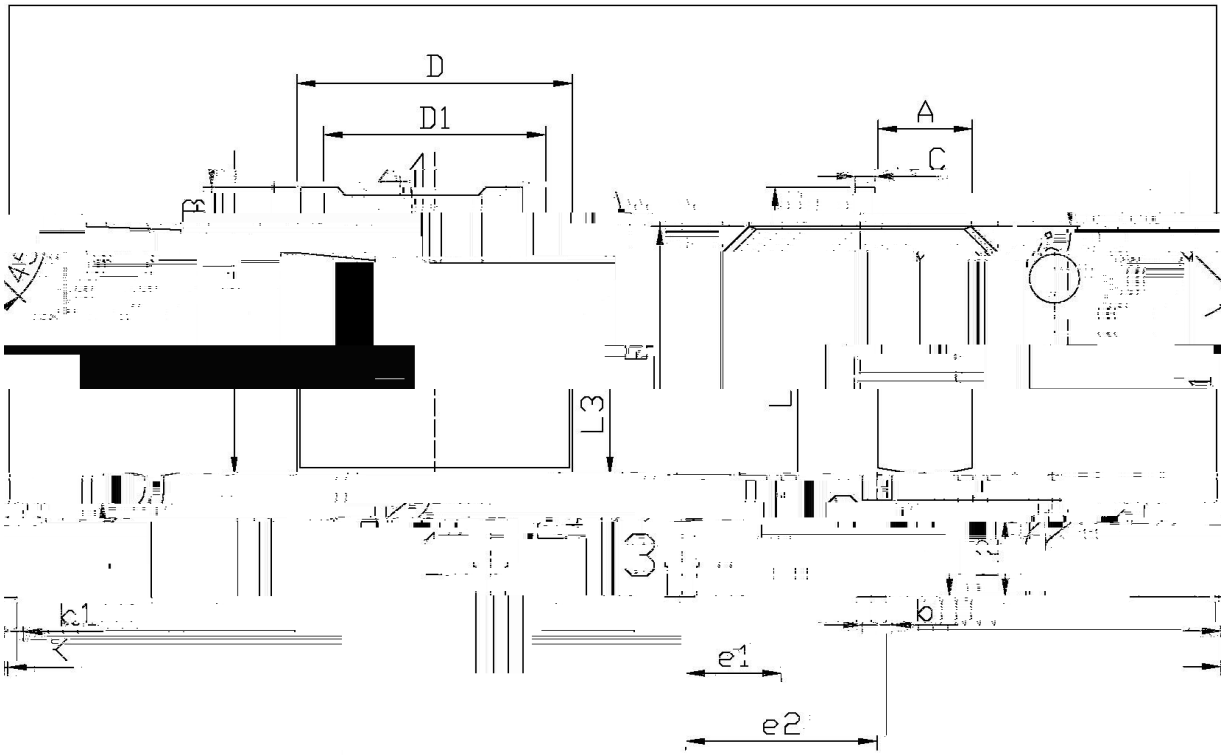
/ Electrical Characteristic Curve







/ Package Dimensions

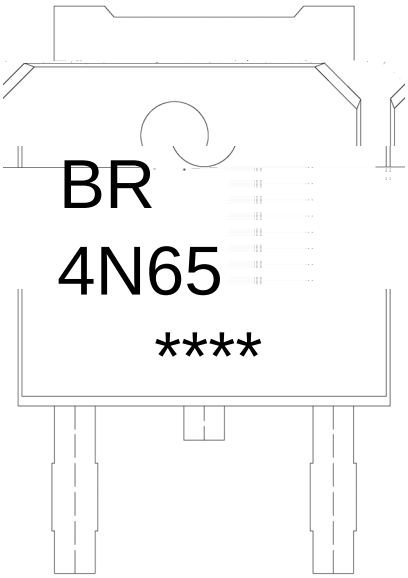


单位：mm

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min.	Max.		Min.	
E	5.95	6.25	A	2.20	
b	2.24	2.34	B	0.95	
b1	0.45	0.55	L1	9.85	10.35
C	0.45	0.55	L2	1.70	2.00
e	0.60	0.90	D1	6.45	6.75
k	0.00	0.10	H1	5.10	5.50

TO-252

/ Marking Instructions



BR

4N65

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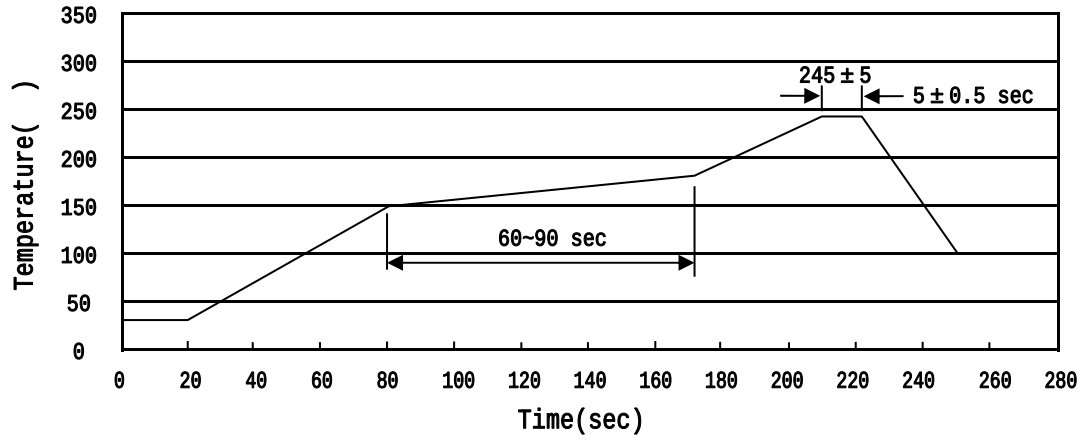
Note:

BR:	Company Code
4N65:	Product Type Code
****:	Lot No. Code, code change with Lot No.

( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

1 150 180 60 90sec;

2 245±5 5±0.5sec;

3 2 10 /sec.

1.Preheating:150~180 , Time:60~90sec.

2.Peak Temp.:245±5 , Duration:5±0.5sec.

3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension		(unit mm³)
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
TO-252	2,500	2	5,000	6	30,000	13 ×16	360×360×50	380×335×366

/ TUBE

Package Type	Units					Dimension		(unit mm³)
	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

/ Notices

All information provided in this document is subject to legal disclaimers.