BRG10N120D

Rev.D Oct.-2015

DATA SHEET

/ Descriptions

TO-3P	Insulated-Gate Bipolar Transistor in a TO-3P Plastic Package.

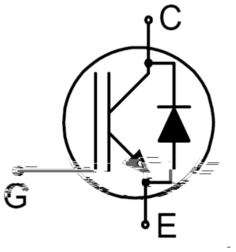
/ Features

Built in fast recovery diode, High reliability and thermal stability parameters, Low switching loss, Low saturation voltage.

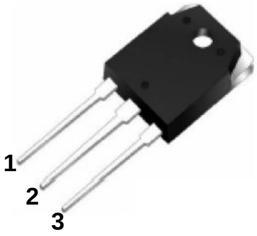
/ Applications

Eddy-current heating.

/ Equivalent Circuit



/ Pinning



PIN1	Gate	PIN 2	Collector	PIN 3	Emitter

/ h_{FE} Classifications & Marking

See Marking Instructions.

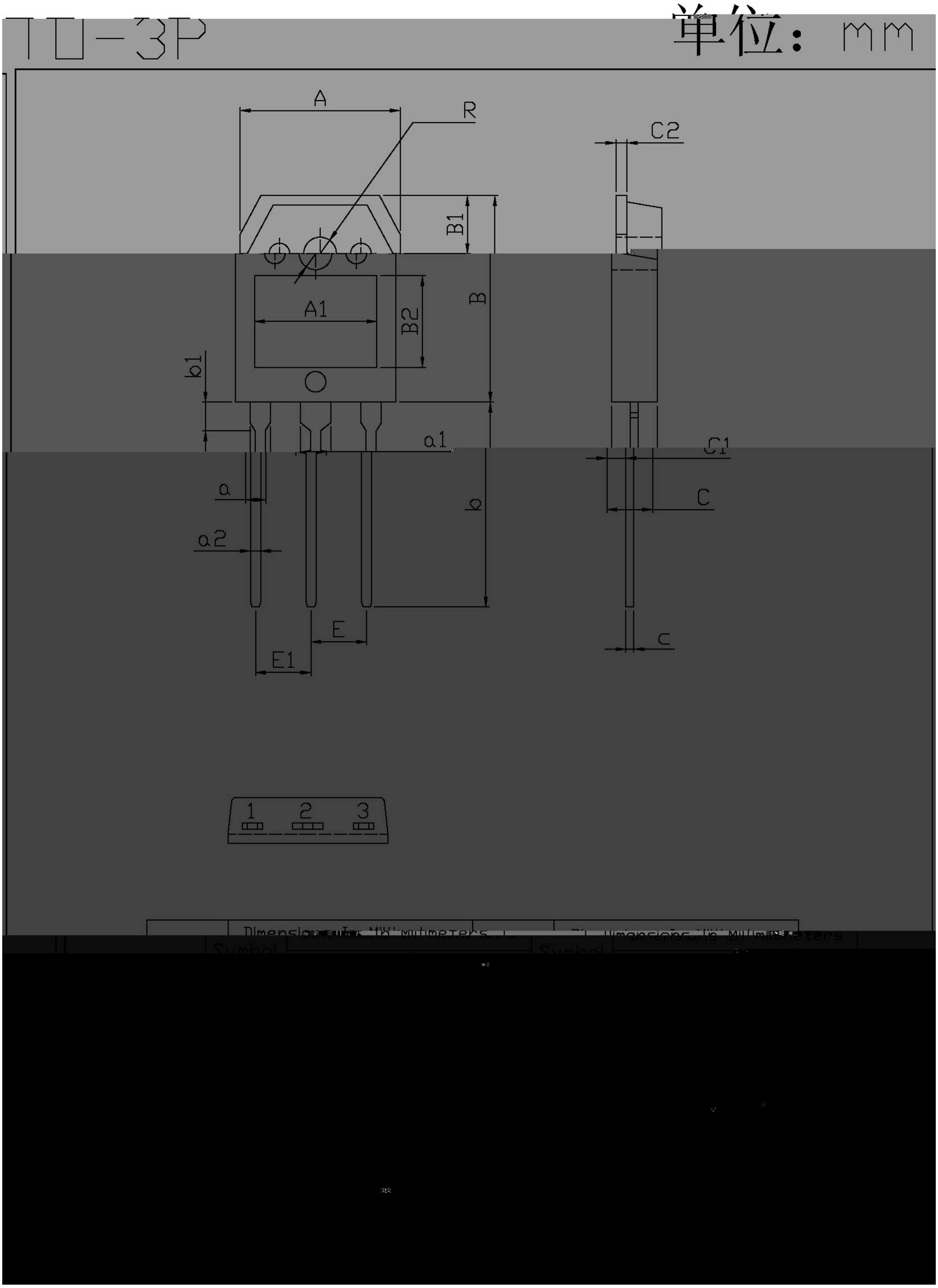
Parameter	Symbol	Rating	Unit
Collector-emitter voltage	V_{CES}	1200	V
Gate-emitter voltage	V_{GES}	±20	V
Collector current@T_C=25℃	I_C	20	A
Collector current@T_C=100℃		10	A
Collector peak current, T_P limited by T_{JMAX}	I_{CM}	30^2	A
Diode forward current	I_F	30^3	A
Diode forward current@T_C=100℃		15	A
Diode maximum forward current	I_{FM}	45^2	A
Power dissipation(T_C=25℃)	P_D	208	W
Power dissipation(T_c=100℃)		83	W
Operating junction and storage temperature range	T_J, T_{stg}	-55～150	℃
IGBT thermal resistance,junction-case	$R_{th(j\text{-}c)}$	0.6	℃/W
Diode thermal resistance,junction-case	$R_{th(j\text{-}CD)}$	2.0	℃/W
Thermal resistance,junction-ambient	$R_{th(j\text{-}a)}$	40	℃/W

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Collector-emitter breakdown voltage	V_{CES}	V_{GE}=0V	I_C=0.5uA	1200	-	-	V
Zero gate voltage Collector current	I_{CES}	V_{GE}=0V	V_{CE}=1200V	-	-	0.1	mA
Gate-body leakage current	=I_{GES}	V_{GE}=20V	V_{CE}=0V	-	-	100	nA
Gate threshold voltage	V						

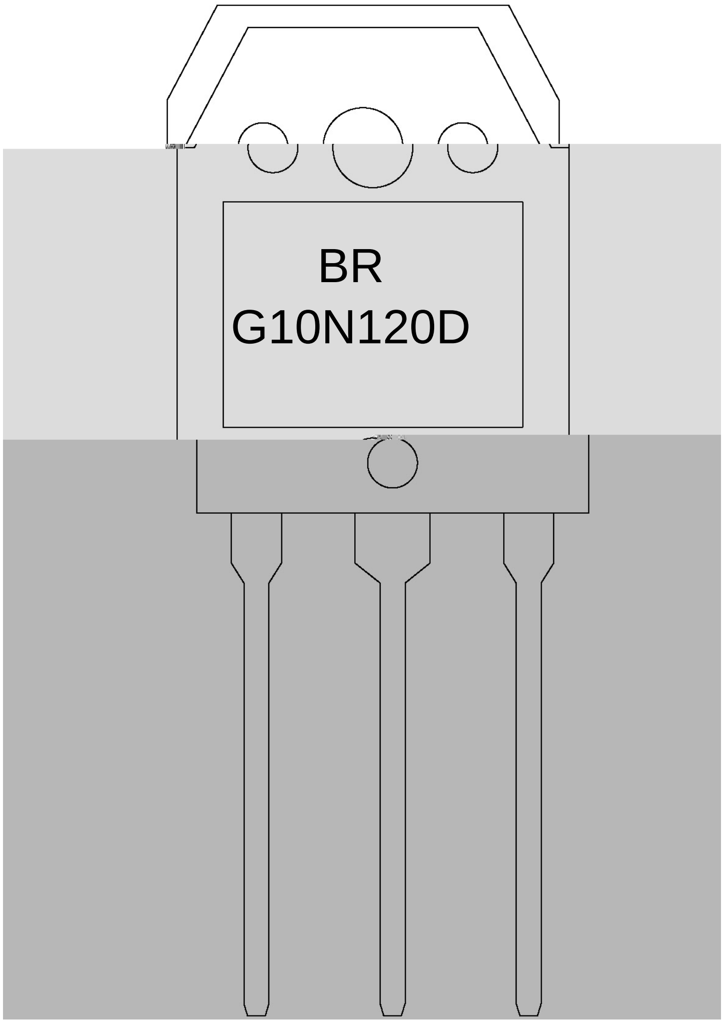
.02 0 0 7.02 337.44 220.6404 Tm 0.0042 Tc0 7.3(CES)Tjage Collect(= 24E(02)CE21404 Tm38863714.3(V)]TJ7.02 0 102 0 0 7.02 273.84 220.64370 TD07.3(CES)Tjage CD( )T(y 42716 222 5.

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-on delay time	$t_{d(ON)}$	V_{CC}=600V I_C=10A R_G=15Ω V_{GE}=15V	-	22	-	ns
Rise time	t_r		-	24	-	

/ Package Dimensions



/ Marking Instructions



BR:

G10N120D

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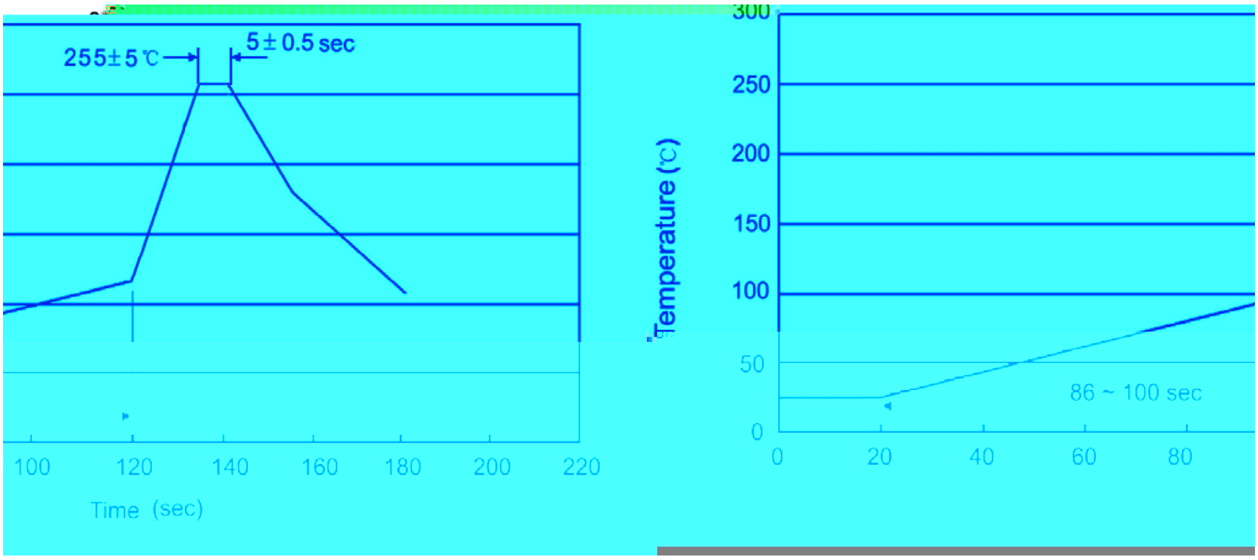
Note:

BR: Company Code.

G10N120D: 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.

/ TUBE

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

/ Notices