WR06S ĮĮĖ ИЈ ♠ Ⅱ Ů Ч ٦ Insulated-Gate Bipolar Transistor in a TO-3P Plastic Package.

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Low gate charge,, Low saturation voltage ,Positive temperature coefficient, RoHS product.

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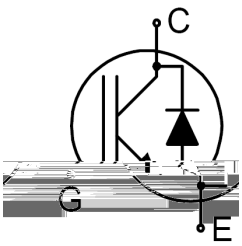
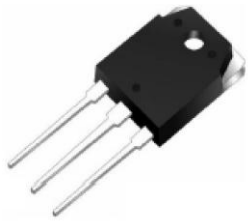
General purpose inverter, Frequency converters, Induction Heating(IH), Uninterrupted Power Supply(UPS).





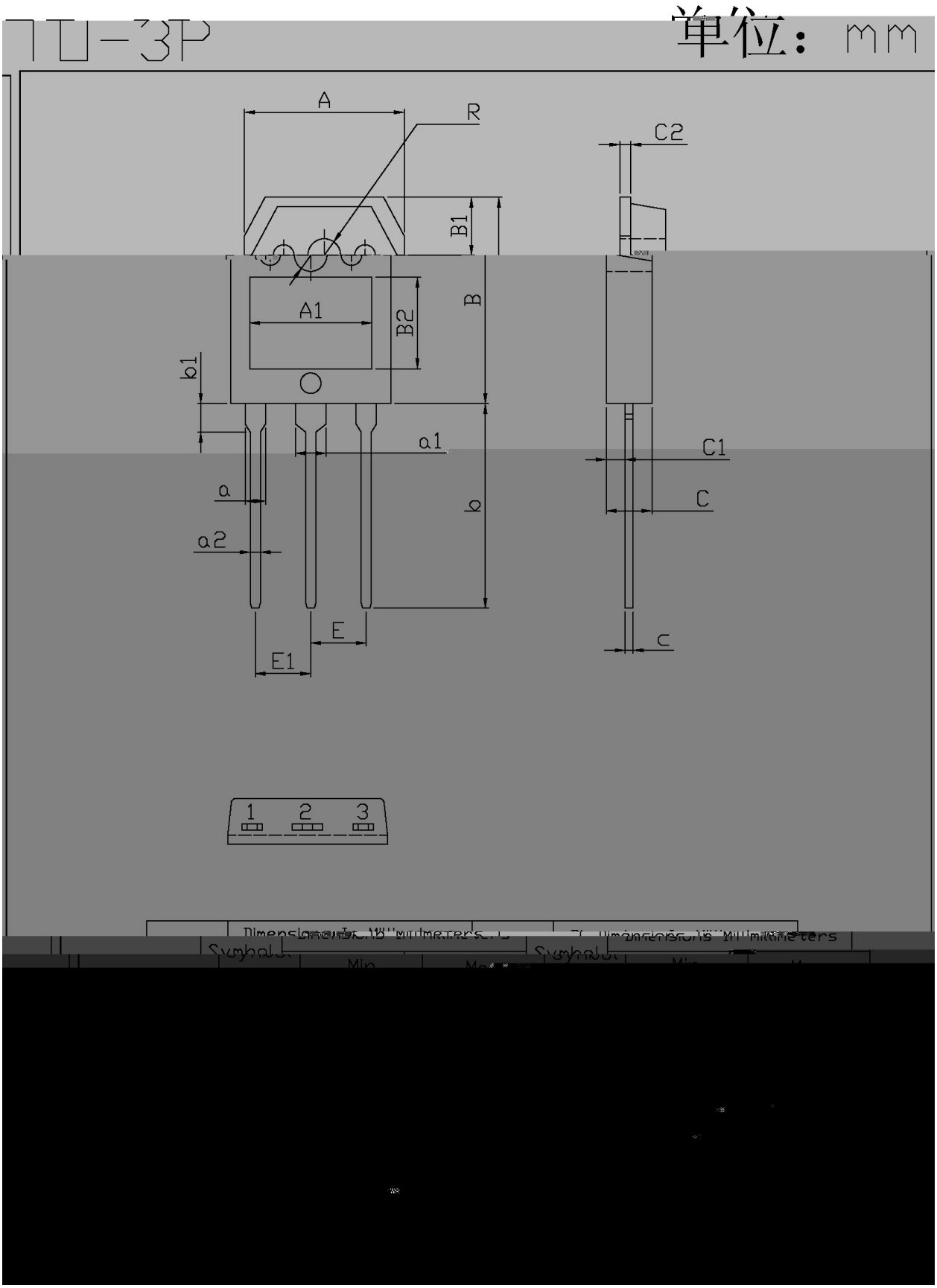
PIN1 χ Gate PIN 2 χ Collector PIN 3 χ Emitter

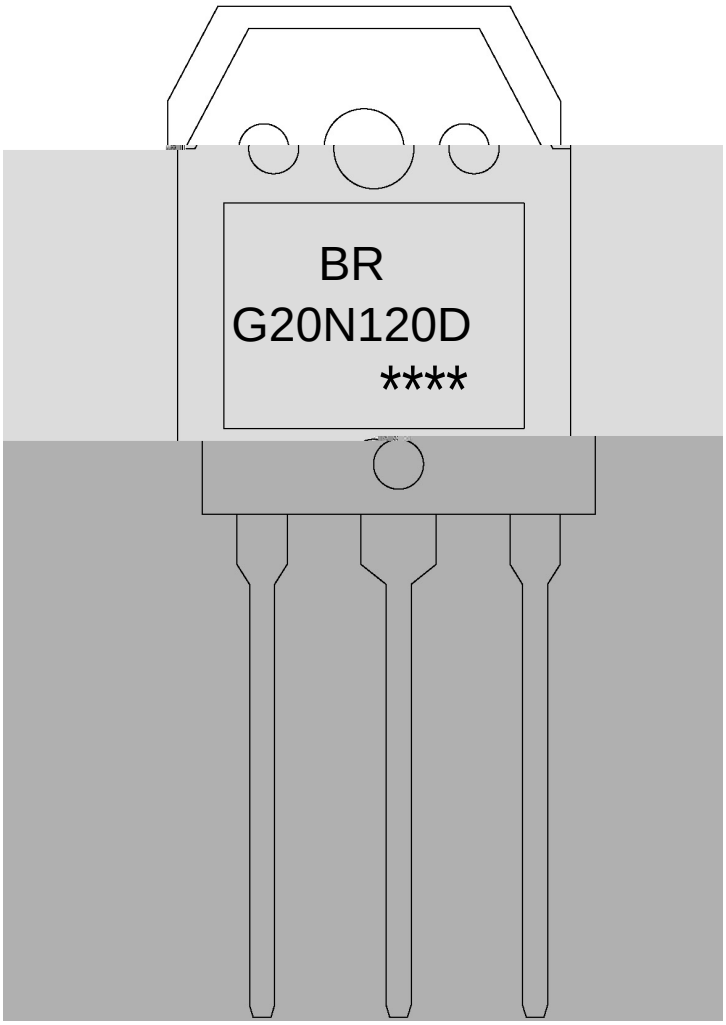
ծ м ٧ ب ˝ See Marking Instructions.

v ̈Ω Parameter	ϒ N Symbol	̈Ω Ö Rating	D Ч Unit
Collector-emitter voltage	V_{CES}	1200	V
Gate-emitter voltage	V_{GES}	±20	V
Collector current	I_C	40	A
Collector current@T_C=100℃		20	A
Collector peak current, T_P limited by T_{JMAX}	I_{CM}	60	A
Diode forward current@T_C=100℃	I_F	20	A
Diode maximum forward current	I_{FM}	60	A
Power dissipation(T_C=25℃)	P_D	240	W
Power dissipation(T_c=100℃)		96	W
Operating junction and storage temperature range	$T_{J,}$ T_{stg}	-55～150	℃
Maximum temperature for soldering	T_L	300	℃
IGBT thermal resistance,junction-case	$R_{th(j-c)}$	0.52	℃/W
Diode thermal resistance,junction-case	$R_{th(j-C)}$	2.4	℃/W
Thermal resistance,junction-ambient	$R_{th(j-a)}$	40	℃/W

v ̈Ω Parameter	ϒ N Symbol	╜ :┤ Ţ Test Conditions	ώ ṇ Ö Min	Ɛ ʒ Ö Typ	ώ ᶻ Ö Max	D Ч Unit
Collector-emitter breakdown voltage	V_{CES}	V_{GE}=0V I_{CE}=250uA	1200	-	-	V
Zero gate voltage Collector current	I_{CES}	V_{GE}=0V V_{CE}=1200V	-	-	1	mA
Gate-body leakage current	I_{GES}	V_{GE}=±20V V_{CE}=0V	-	-	±250	nA
Gate threshold voltage	$V_{GE(th)}$	I_C=15mA V_{CE}=V_{GE}	3.5	-	7.5	V
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=20A V_{GE}=15V	-	2	2.5	V
Input capacitance	C_{ies}	V_{CE}=25V V_{GE}=0V f=1MHz	-	3030	-	pF
Output capacitance	C_{oes}		-	76	-	
Reverse transfer capacitance	C_{res}		-	125	-	

v Ѽ Parameter	ϒ N Symbol	⊪ ⁝ ϯ ϒ Test Conditions	ѡ ɳ Ө Min	Ɛ ȝ Ө Typ	ѡ ᶻ Ө Max	ɒ Ꮒ Unit
Turn-on delay time	$t_{d(ON)}$	V_{CC}=600V I_C=20A, R_G=10Ω V_{GE}=15V Inductive Load	-	41	-	ns
Rise time	t_r		-	38	-	
Turn-off delay time	$t_{d(OFF)}$		-	206	-	
Fall time	t_f		-	341	-	
Turn-On Switching Loss	E_{on}		-	1	2.1	mJ
Turn-Off Switching Loss	E_{off}		-	1.2	1.5	
Total Switching Loss	E_{ts}		-	2.1	3.6	
Total gate charge	Q_G	V_{CC}=600V I_C=20A V_{GE}=15V	-	154	224	nC
Gate-emitter charge	Q_{G-E}		-	16	25	
Gate-collector charge	Q_{G-C}		-	56	80	
Diode forward voltage	V_F	I_F=20A	-	1.3	2.7	V
Reverse recovery time	Trr	I_F=20A di/dt=200A/μS	-	430	481	ns
Diode Peak Reverse Recovery						

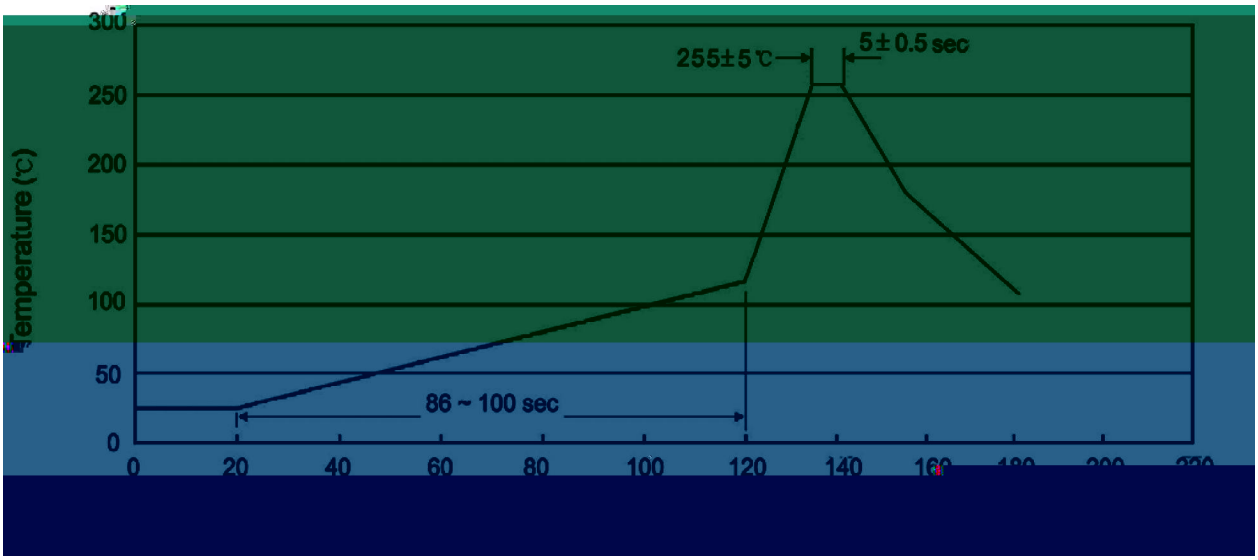

TO-3P
单位：mm
A
R
C2
B1
A1
B2
B
b1
a1
C1
a
C
b
a2
E
E1
c
1 2 3



EU:	
J53Q453G	

Note:

BR:	Company Code.
G20N120D:	Product Type.
****:	Lot No. Code, code change with Lot No.



ب ˝ χ

1 Ĺ ♬ □ ỷ 25 Ḱ 150 ł ı `H ڑ 60 Ḱ 90sec;

2 Š Ë □ ỷ 255 ° 5 ł ı `H ڑ `Y ㅅ ㎛ 5 ° 0.5sec;

3 ì ˙ ㅓ ˛ ↄ ෯ ỷ ㎛ 2 Ḱ 10 ł /sec.

Note:

1.Preheating:25~150 ł , Time:60~90sec.

2.Peak Temp.:255 ° 5 ł , Duration:5 ° 0.5sec.

3. Cooling Speed: 2~10 ł /sec.

□ ỷ χ 270 ° 5 ł `H ڑ χ 10 ° 1 sec. Temp.:270±5℃ Time:10±1 sec

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Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm^3)		
	Units/Tube 只/套管	Tubes/Inner Box 套管/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Tube 套管	Inner Box 盒	Outer Box 箱
TO-3P	30	15	450	5	2250	497.5×46×8	555×164×50	575 290 180