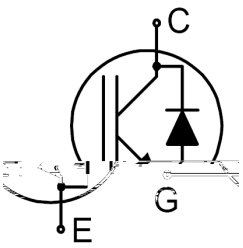
WR06S ĮĮĖ Ν ɹ ɻ Ⅱ ὐ ч ᒣ Insulated-Gate Bipolar Transistor in a TO-3P Plastic Package.

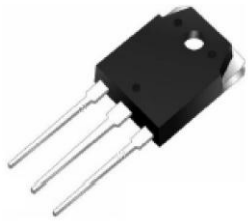
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Low gate charge,, Low saturation voltage ,Positive temperature coefficient, RoHS product.

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





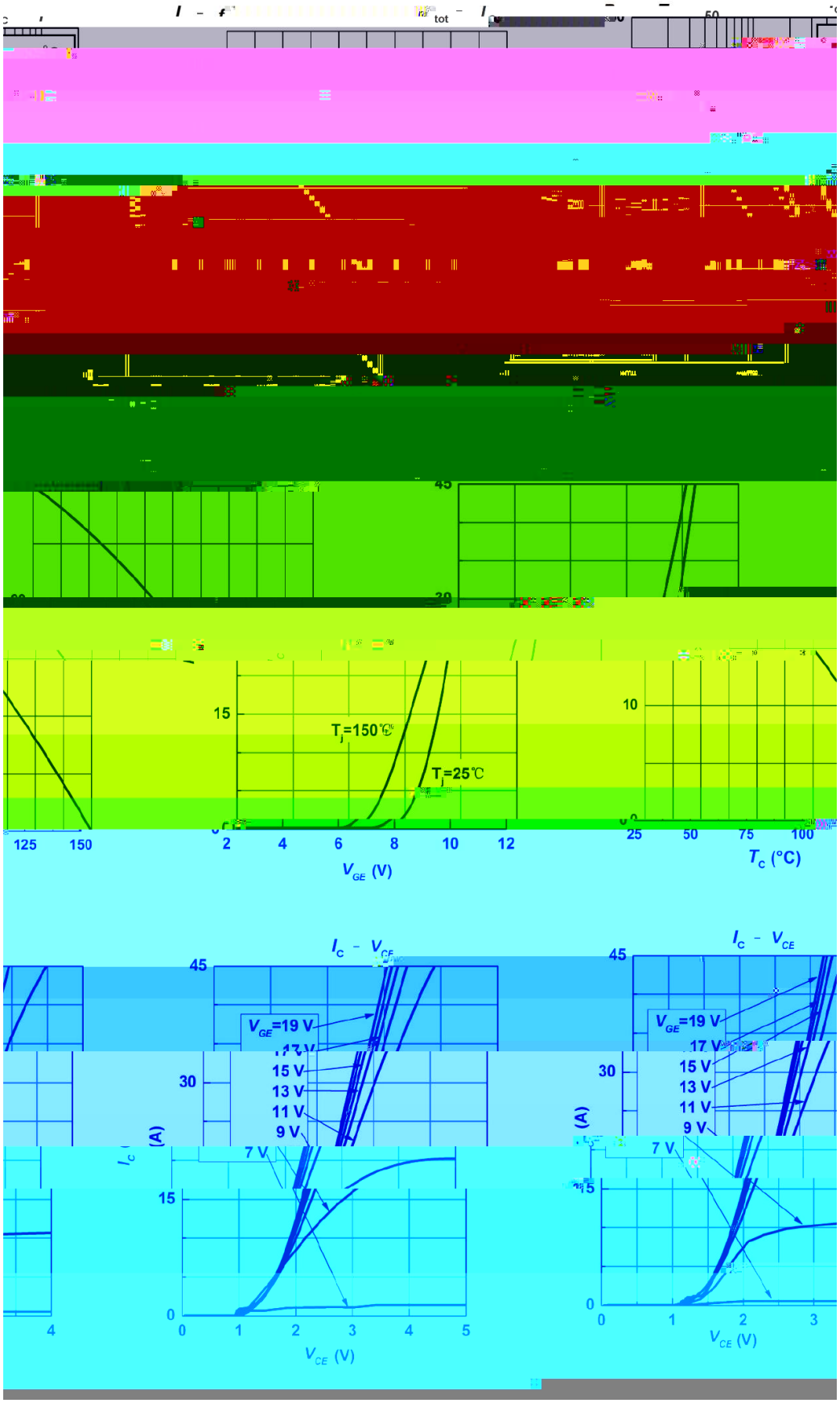
PIN1 χ Gate PIN 2 χ Collector PIN 3 χ Emitter

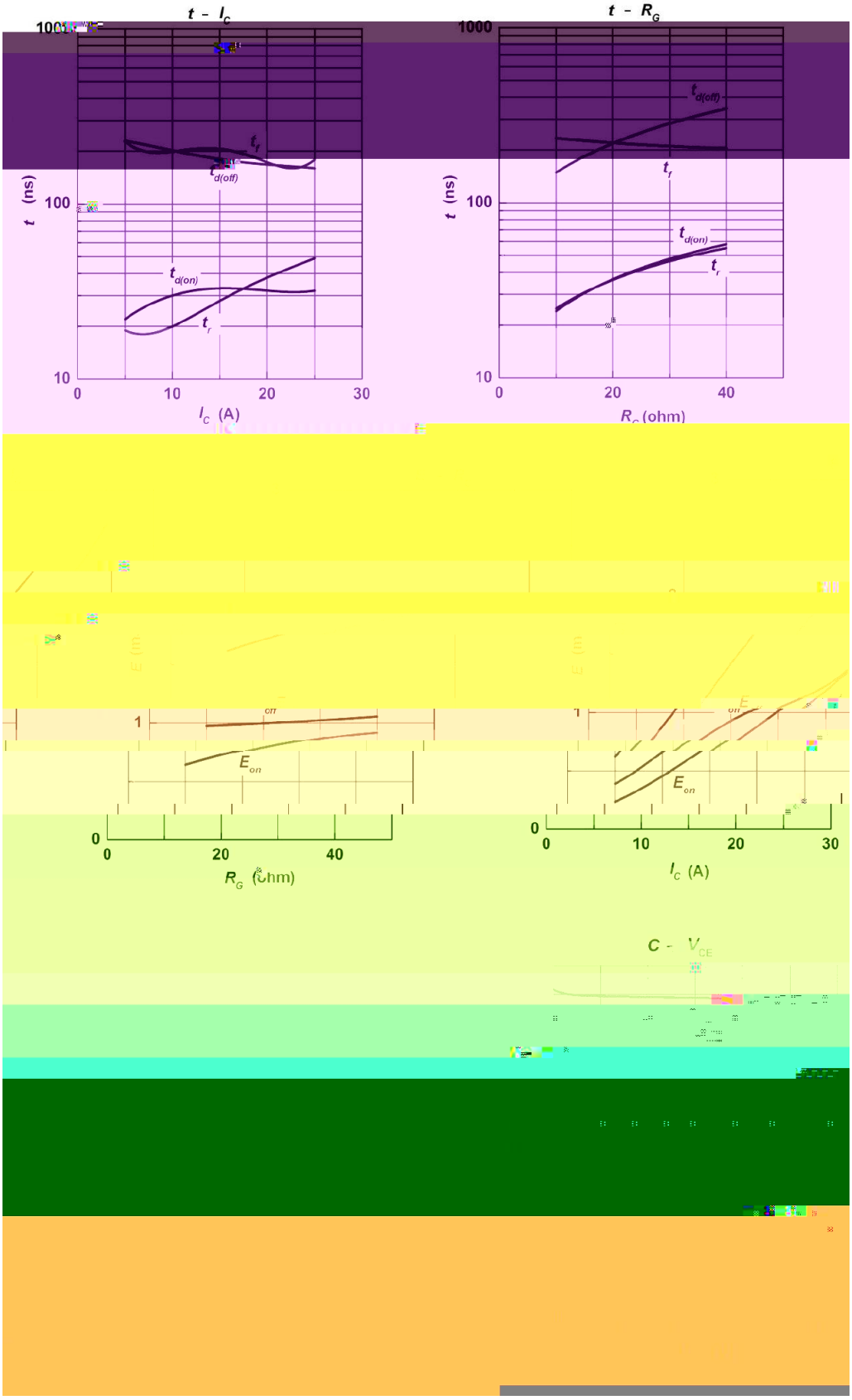
ծ м ᒣ ب ˝ See Marking Instructions.

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	30	A
Collector current@T_C=100		15	A
Collector peak current, T_P limited by T_{JMAX}	I_{CM}	45	A
Diode forward current@T_C=100	I_F	15	A
Diode maximum forward current	I_{FM}	45	A
Power dissipation(T_C=25)	P_D	186	W
Power dissipation(T_c=100)		74	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	$R_{th(j-c)}$	0.67	/W
Diode thermal resistance,junction-case	$R_{th(j-C)}$	2.88	/W
Thermal resistance,junction-ambient	$R_{th(j-a)}$	40	/W

v ″Ω Parameter	ϒ N Symbol	Ш :ϒ Ţ Test Conditions	ω ņ Ö Min	ЄЋ Ö° Max	Unit

v ̈Ω Parameter	ϒ N Symbol	⅄ ⍧ ϒ Test Conditions	ω ṇ Ö Min	Ɛ ʒ Ö Typ	ω ᶻ Ö Max	ɒ Ꮒ Unit
Turn-on delay time	$t_{d(ON)}$	V_{CE}=600V I_C=15A R_G=15Ω V_{GE}=15/0V Inductive Load	-	25	-	ns
Rise time	t_r		-	48	-	
Turn-off delay time	$t_{d(OFF)}$		-	155	-	
Fall time	t_f		-	115	-	
Turn-On Switching Loss	E_{on}		-	0.67	-	mJ
Turn-Off Switching Loss	E_{off}		-	0.45	-	
Total Switching Loss	E_{ts}		-	1.12	-	
Total gate charge	Q_G	V_{CE}=600V I_C=15A V_{GE}=15V	-	130	180	nC
Gate-emitter charge	Q_{G-E}		-	15	22	
Gate-collector charge	Q_{G-C}		-	50	65	
Diode forward voltage	V_F	I_F=15A	-	1.2	2.0	V
Reverse recovery time	Trr	I_F=15A di/dt=200A/μS	-	330	360	ns
Diode Peak Reverse Recovery Current	Irr		-	30	40	A
Reverse recovery charge	Qrr		-	4770	6600	nC


15
T_j=150℃
T_j=25℃
125
150
2
4
6
8
10
12
V_{GE} (V)
10
25
50
75
100
T_C (°C)
I_C - V_{CE}
45
V_{GE}=19 V
15 V
13 V
11 V
9 V
30
7 V
15
0
0
1
2
3
4
5
V_{CE} (V)
I_C - V_{CE}
45
V_{GE}=19 V
15 V
13 V
11 V
9 V
30
7 V
15
0
0
1
2
3
V_{CE} (V)


t - I_C
t (ns)
1000
100
10
0
10
20
30
I_C (A)
t_f
t_d(off)
t_d(on)
t_r
t - R_G
1000
100
10
0
20
40
R_G (ohm)
t_d(off)
t_f
t_d(on)
t_r
E (mJ)
1
E_on
0
0
20
40
R_G (ohm)
E (mJ)
E_on
0
0
10
20
30
I_C (A)
C - V_CE

/

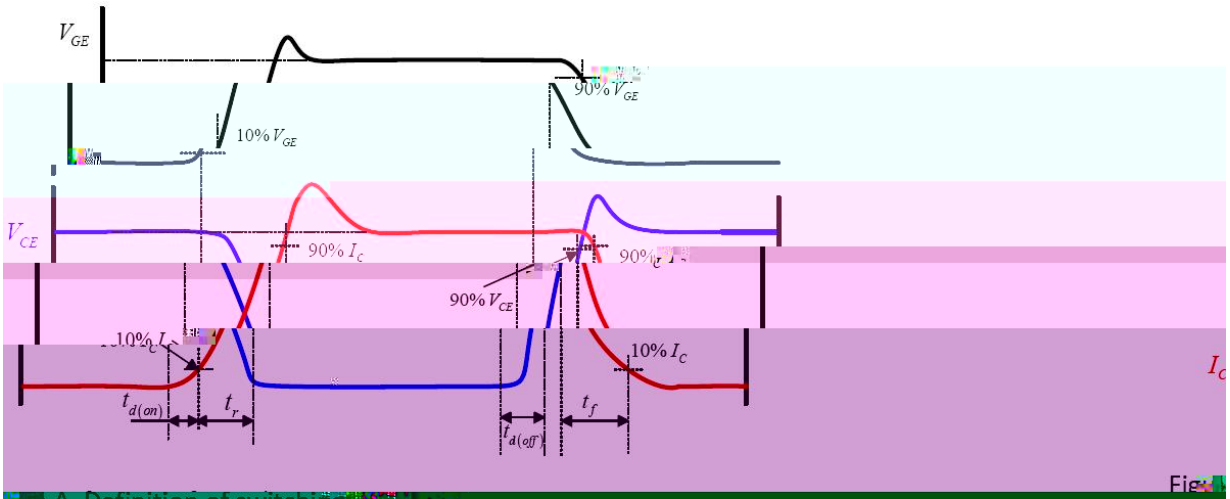


Figure A. Definition of switching characteristics

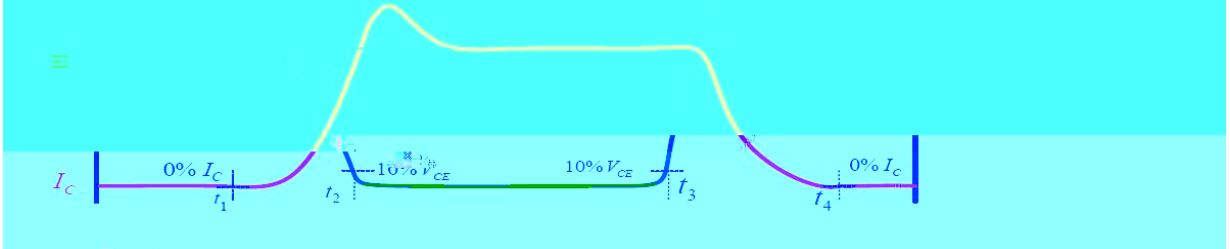


Figure B. Switching loss

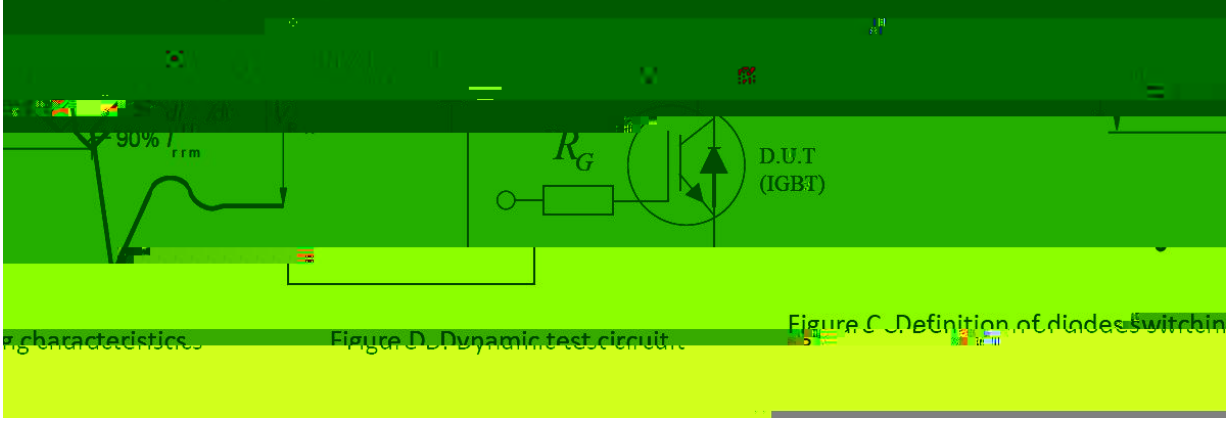
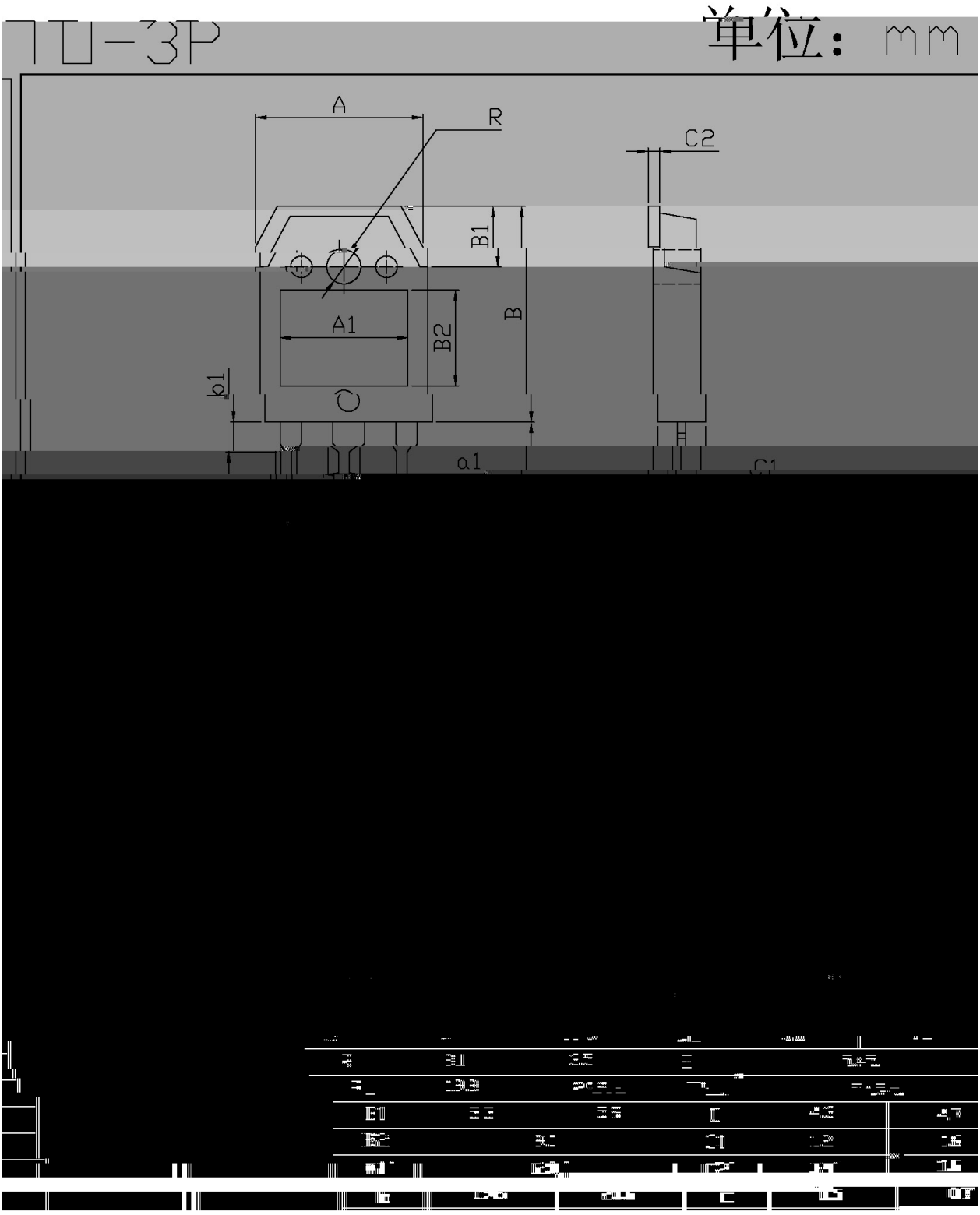


Figure C. Definition of diodes switching characteristics

Figure D. Dynamic test circuit


TO-3P
单位：mm
A
R
C2
B1
B
A1
B2
b1
C
a1
C1



ب ˝ χ

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

2 Š Ө □ ỷ 255 ° 5 ɬ ı `H ڑ `Y ʌ ʁ 5 ° 0.5sec;

3 ì ˙ ϒ ˛ ɔ ﻩ ỷ ʁ 2 Ḱ 10 ɬ /sec.

Note:

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

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

3. Cooling Speed: 2~10 ɬ /sec.

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

˛ ϒ ɣ Ь / 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