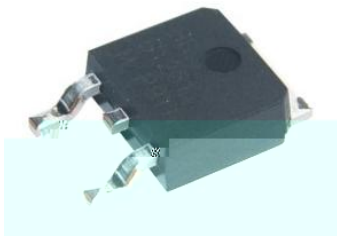
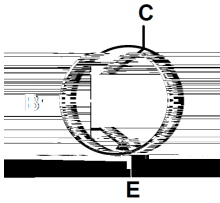


Rev.B .May.-2018

TO-252 NPN Silicon NPN transistor in a TO-252 Plastic Package.

$BV_{CEO} > 100V$;
 $I_C = 3A$ high Continuous Collector Current;
 $I_{CM} = 5A$ Peak Pulse Current;

Power Switching or Amplification Applications



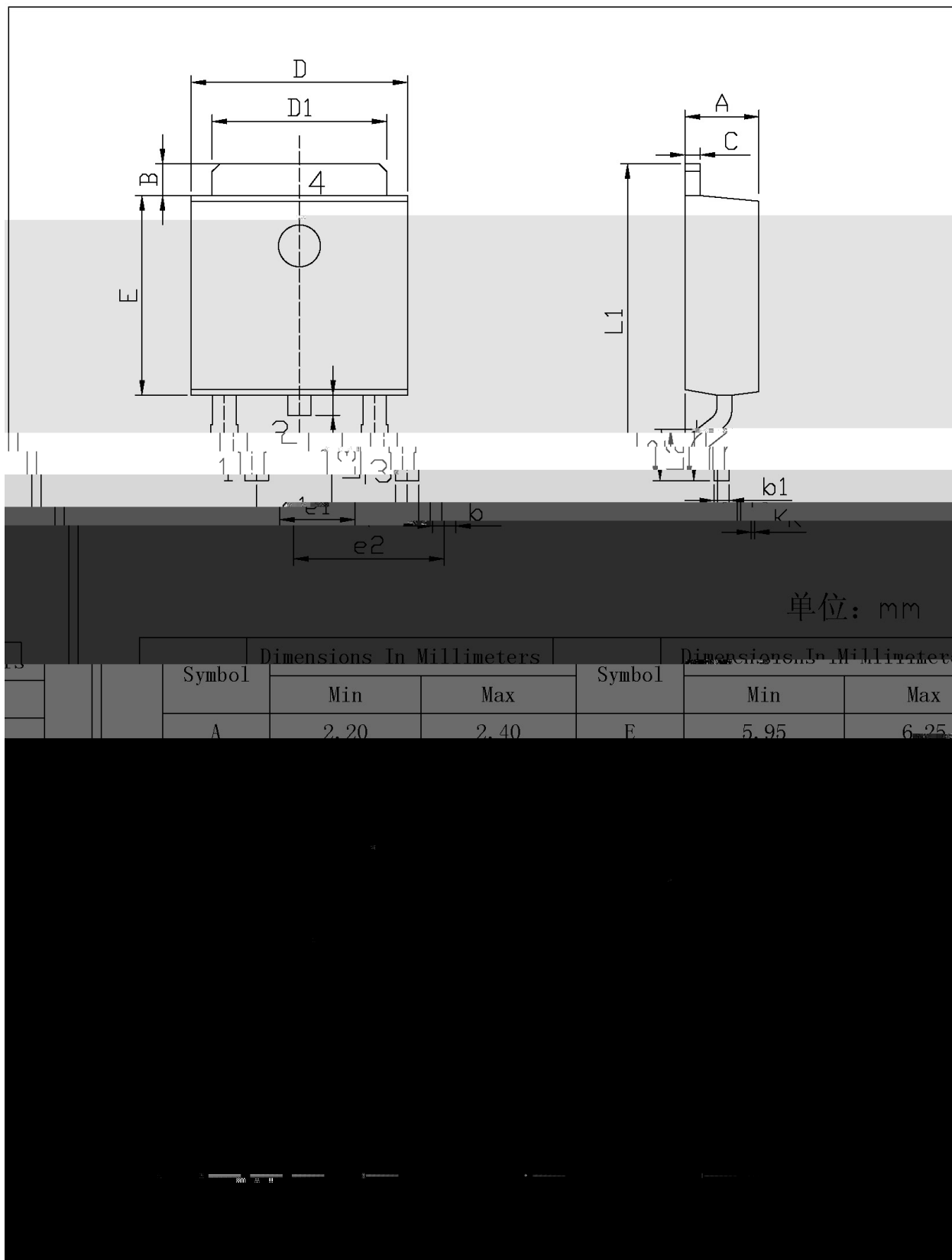
PIN1 Base PIN 2 4 Collector PIN 3 Emitter

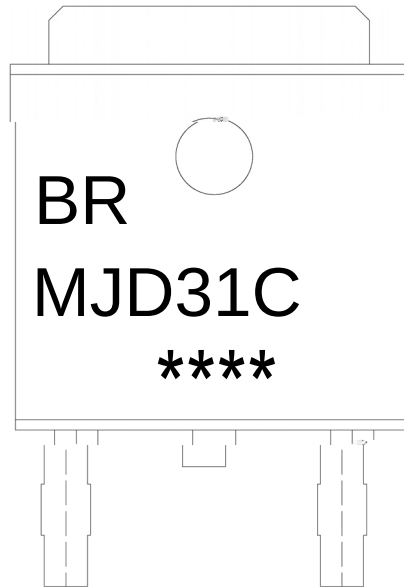
See Marking Instructions.

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	100	V
Collector to Emitter Voltage	V_{CEO}	100	V
Emitter to Base Voltage	V_{EBO}	6	V
Collector Current - Continuous	I_C	3	A
Peak Pulse Collector Current	I_{CM}	5	A
Continuous Base Current	I_B	1	A
Power Dissipation	P_D	1.6	W
Power Dissipation ($T_c=25^\circ\text{C}$)	P_D	15	W
Junction-to-Ambient	$R_{\theta JA}$	78	$^\circ\text{C/W}$
Junction-to-Case	$R_{\theta JC}$	8.3	$^\circ\text{C/W}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=30\text{mA}$ $I_B=0$	100			V
Collector Cut-off Current	I_{CEO}	$V_{CB} = 60\text{V}$ $I_B=0$			1	μA
Collector Cut-off Current	I_{CES}	$V_{CE}=100\text{V}$ $V_{EB}=0$			1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5\text{V}$ $I_C=0$			1	μA
Collector-Emitter Saturation Voltage (Note 10)	$V_{CE(sat)}$	$I_C=4.0\text{A}$ $I_B=0.4\text{A}$			1.2	V
Base-Emitter Turn-On Voltage (Note 10)	$V_{BE(on)}$	$I_C=3\text{A}$ $V_{CE}=4\text{V}$			1.8	V
DC Current Gain (Note 10)	h_{FE}	$V_{CE}=4\text{V}$ $I_C=1\text{A}$	70			
		$V_{CE}=4\text{V}$ $I_C=3\text{A}$	20		70	
Current Signal Current Gain	H_{fe}	$V_{CE}=10\text{V}$ $I_C=0.5\text{A}$ $f=1\text{KHz}$	20			
Current Gain-Bandwidth Product	f_T	$I_C=500\text{mA}$ $V_{CE}=10\text{V}$ $f = 1\text{MHz}$	3.0			MHz







BR

MJD31C

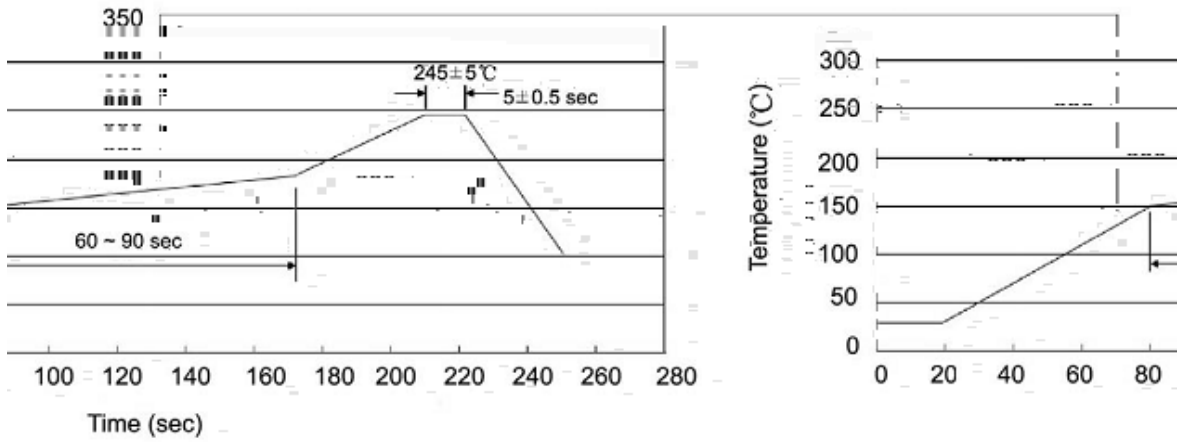
Note:

BR: Company Code

MJD31C: Product Type.

****: 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.

260±5

10±1 sec.

Temp.:260±5℃

Time:10±1 sec

/ REEL

Package Type 封装形式	Units 包装数量		Dimension 包装尺寸 (unit: mm ³)
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	