

/ Descriptions

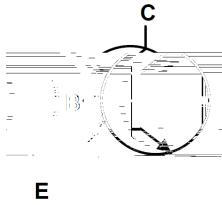
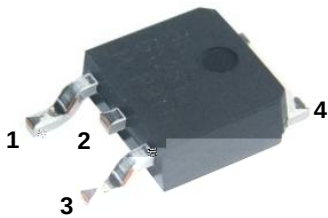
TO-252 NPN Silicon NPN transistor in a TO-252 Plastic Package.

/ Features

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

/ Applications

Power Switching or Amplification Applications

/ Equivalent Circuit**/ Pinning**

PIN1 Base PIN 2 4 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

See Marking Instructions.

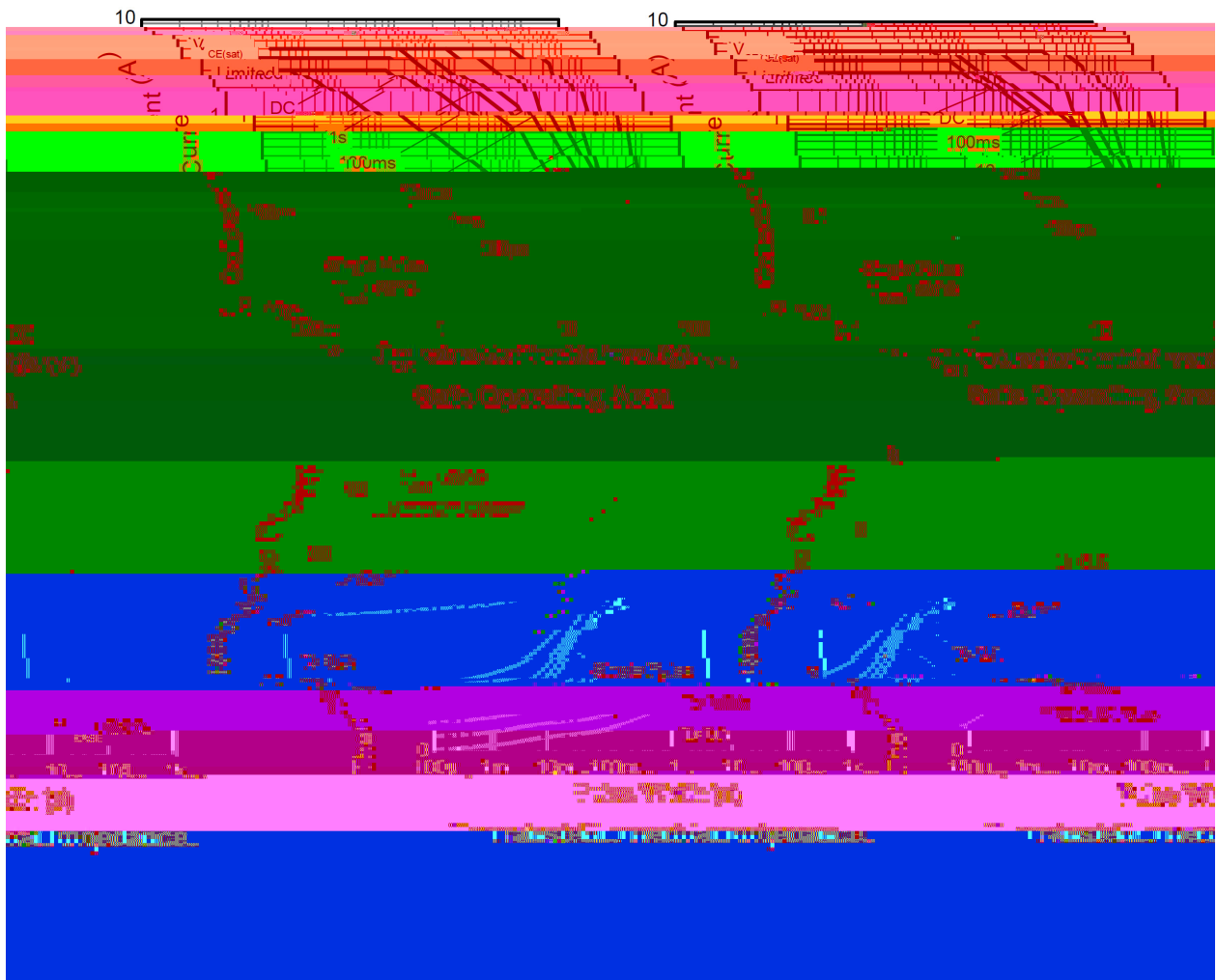
/ Absolute Maximum Ratings(Ta=25)

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 (Tc=25)	P_D	15	W
Junction-to-Ambient	$R_{\theta JA}$	78	°C/W
Junction-to-Case	$R_{\theta JC}$	8.3	°C/W

/ Electrical Characteristics(Ta=25)

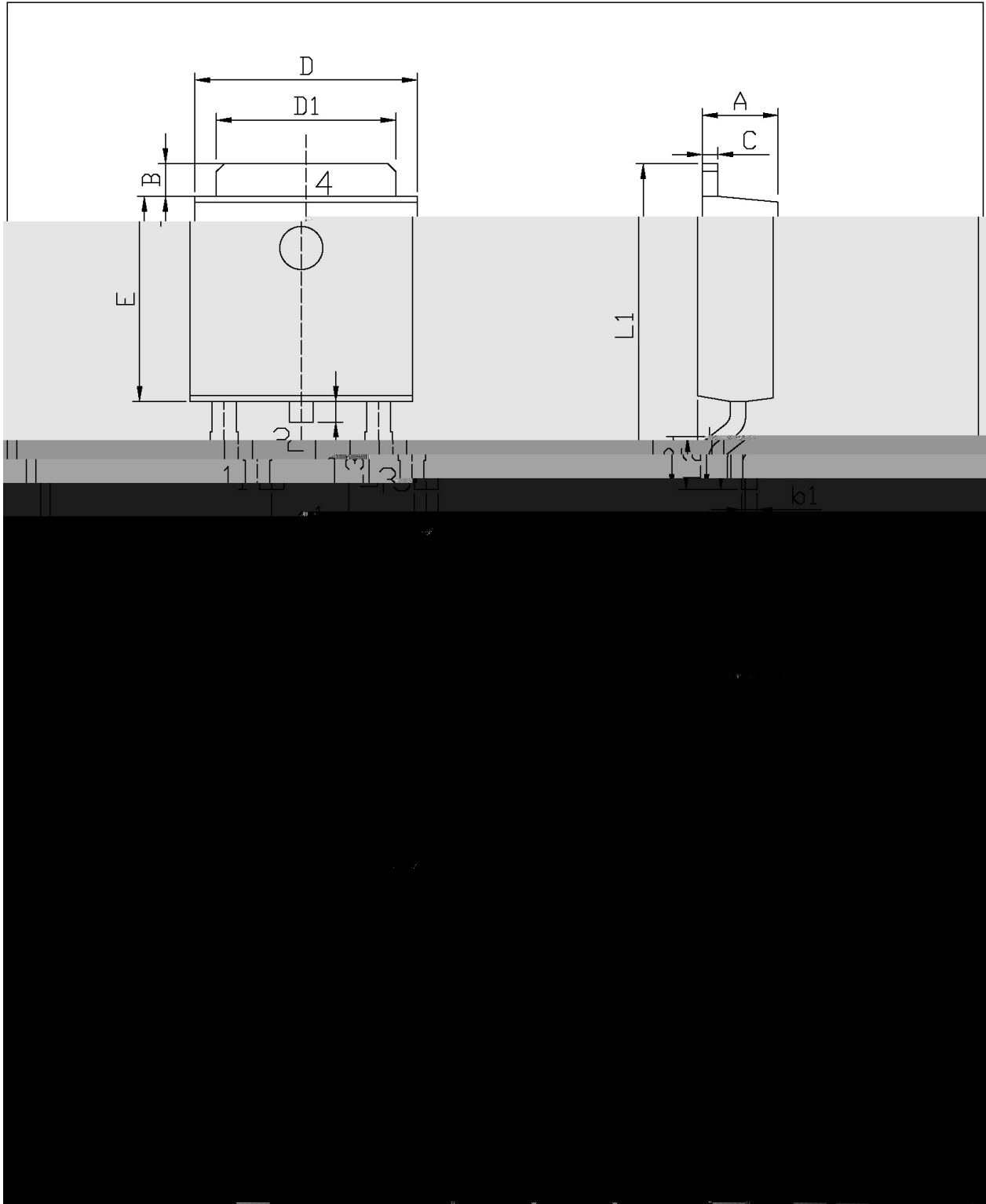
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=30mA$ $I_B=0$	100			V
Collector Cut-off Current	I_{CEO}	$V_{CB} = 60V$ $I_B=0$			1	μA
Collector Cut-off Current	I_{CES}	$V_{CE}=100V$ $V_{EB}=0$			1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5V$ $I_C=0$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

/ Electrical Characteristic Curve

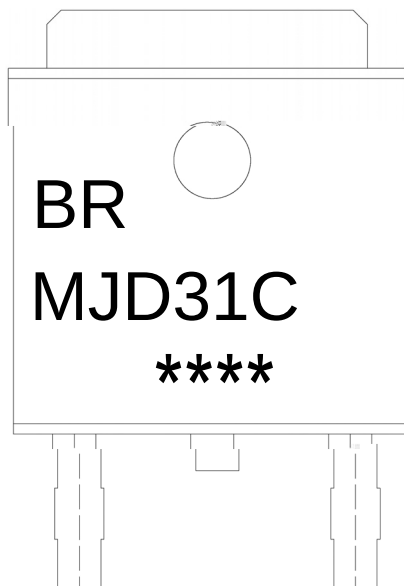


BRMJD31CDP

/ Package Dimensions



/ Marking Instructions



BR

MJD31C

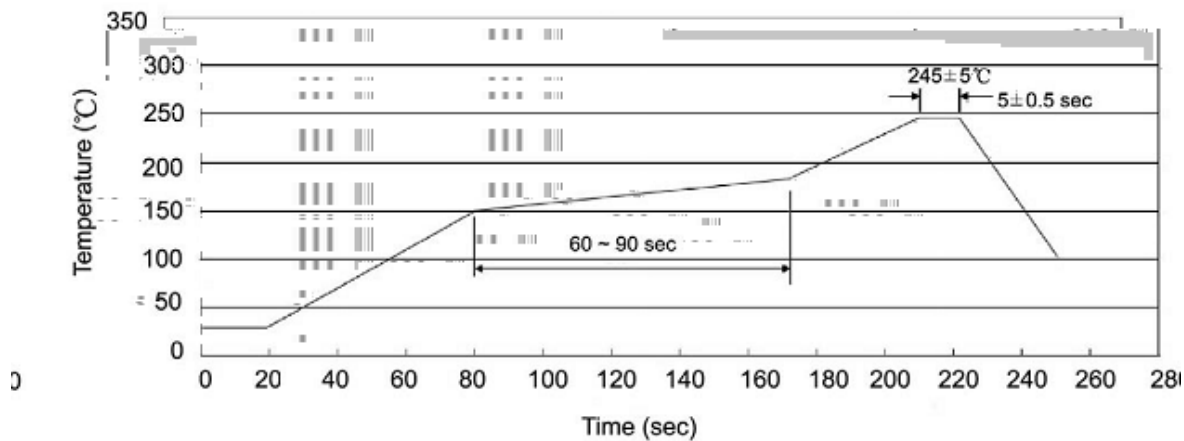
Note:

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;

1.Preheating:150~180 , Time:60~90sec.
- 2

245±5

5±0.5sec;

2.Peak Temp.:245±5 , Duration:5±0.5sec.
- 3

2 10 /sec.

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 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	