

/ Descriptions

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

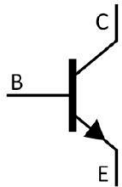
/ Features

V_{CEO}
Low Collector Emitter Saturation Voltage, High Current Gain.

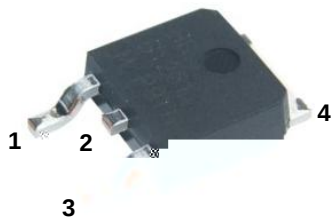
/ Applications

Low power audio amplifier, Low current, high speed switching applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2,4 Collector PIN 3 Emitter

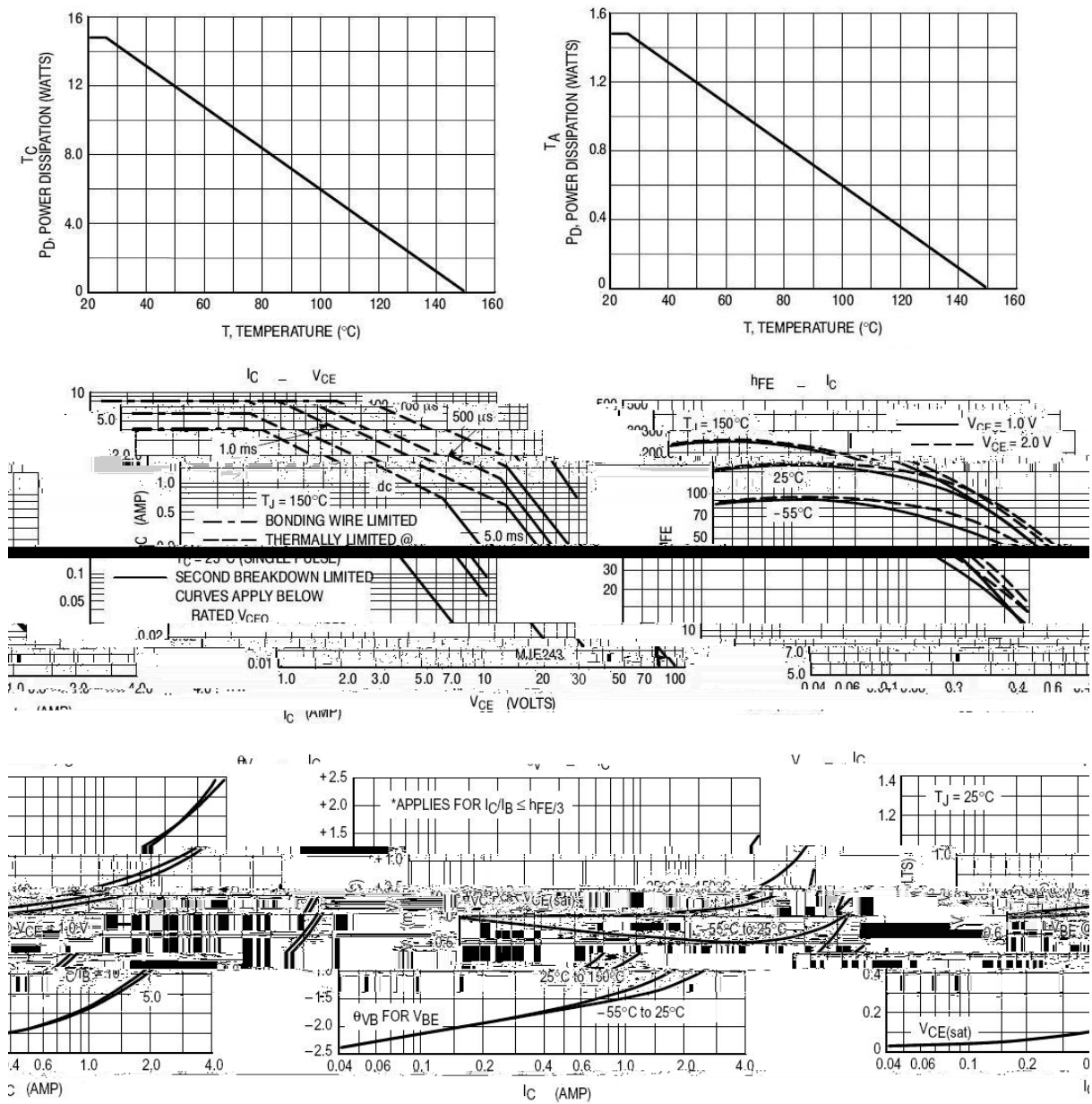
/ h_{FE} Classifications & Marking

See Marking Instructions.

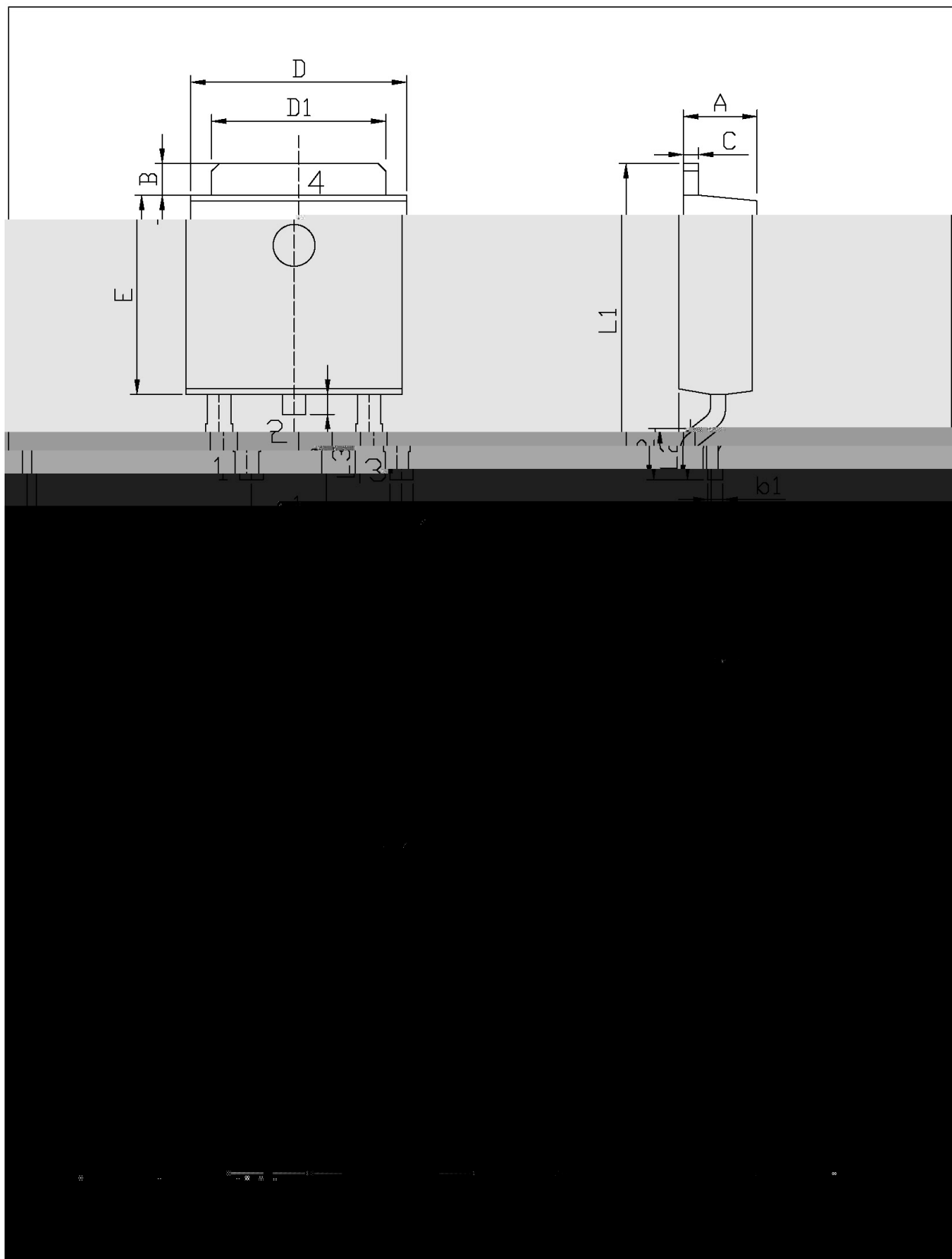
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	100	V
Collector to Emitter Voltage	V_{CEO}	100	V
Emitter to Base Voltage	V_{EBO}	7.0	V
Collector Current - Continuous	$I_{C(1)}$	4.0	A
Peak Collector Current - Continuous	$I_{C(2)}$	8.0	A
Base Current - Continuous	I_B	10	A
Collector Power Dissipation	P_D	1.4	W
Collector Power Dissipation	$P_D(T_c=25^\circ C)$	12.5	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=10mA$ $I_B=0$	100			V
Collector Cut-Off Current	$I_{CBO(1)}$	$V_{CB}=100V$ $I_E=0$			0.1	A
	$I_{CBO(2)}$	$V_{CE}=100V$ $T_c=125$			0.1	mA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=-7.0V$ $I_C=0$			0.1	A
DC Current Gain	$h_{FE(1)}$	$V_{CE}=1.0V$ $I_C=200mA$	40		180	
	$h_{FE(2)}$	$V_{CE}=1.0V$ $I_C=1.0A$	15			
Collector to Emitter Saturation Voltage	$V_{CE(sat) (1)}$	$I_C=500mA$ $I_B=50mA$			0.3	V
	$V_{CE(sat) (2)}$	$I_C=1.0A$ $I_B=100mA$			0.6	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=2.0A$ $I_B=200mA$			1.8	V
Base to Emitter On Voltage	$V_{BE(on)}$	$V_{CE}=1.0V$ $I_C=500mA$			1.5	V
Current- Gain Bandwidth Product	f_T	$V_{CE}=10V$ $I_C=100mA$	40			MHz

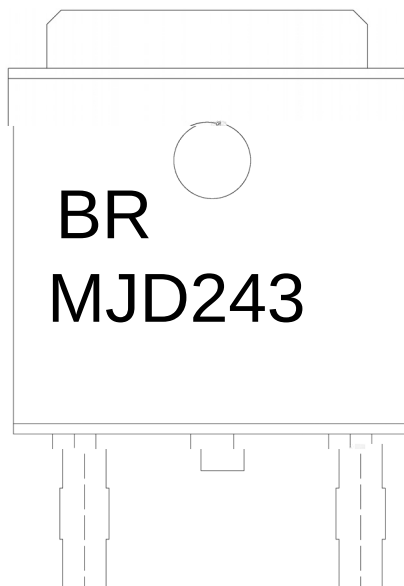
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



BR

MJD243

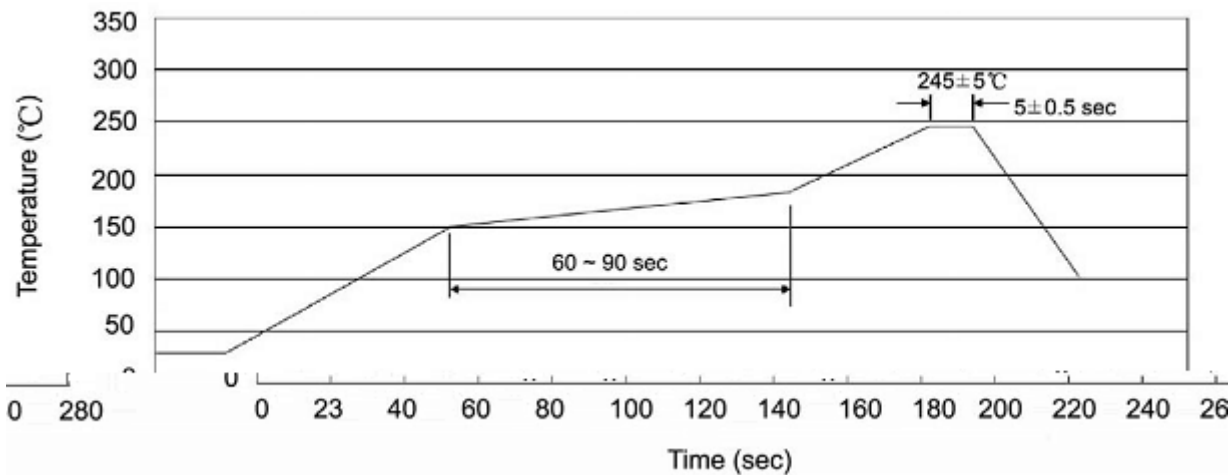
Note:

BR: Company Code

MJD243: Product Type.

****: Lot No. Code, code change with Lot No.

() / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- | | | | | | |
|---|-------|-----|-----------|---|--------------------------------------|
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150 , 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)		
	只 卷盘	卷盘 盒	只 盒	盒 箱	只 箱		盒	箱