

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

/ 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}	5.0	V
Collector Current - Continuous	I _C	2.0	A
Collector Current – Continuous(Pulse)	I _{C(Pulse)}	4.0	A
Base Current - Continuous	I _B	50	mA
Collector Power Dissipation	P _C	1.75	W
Collector Power Dissipation	P _C (T _C =25℃)	20	W
Junction Temperature	T _j	150	℃
Storage Temperature Range	T _{stg}	-55 150	℃

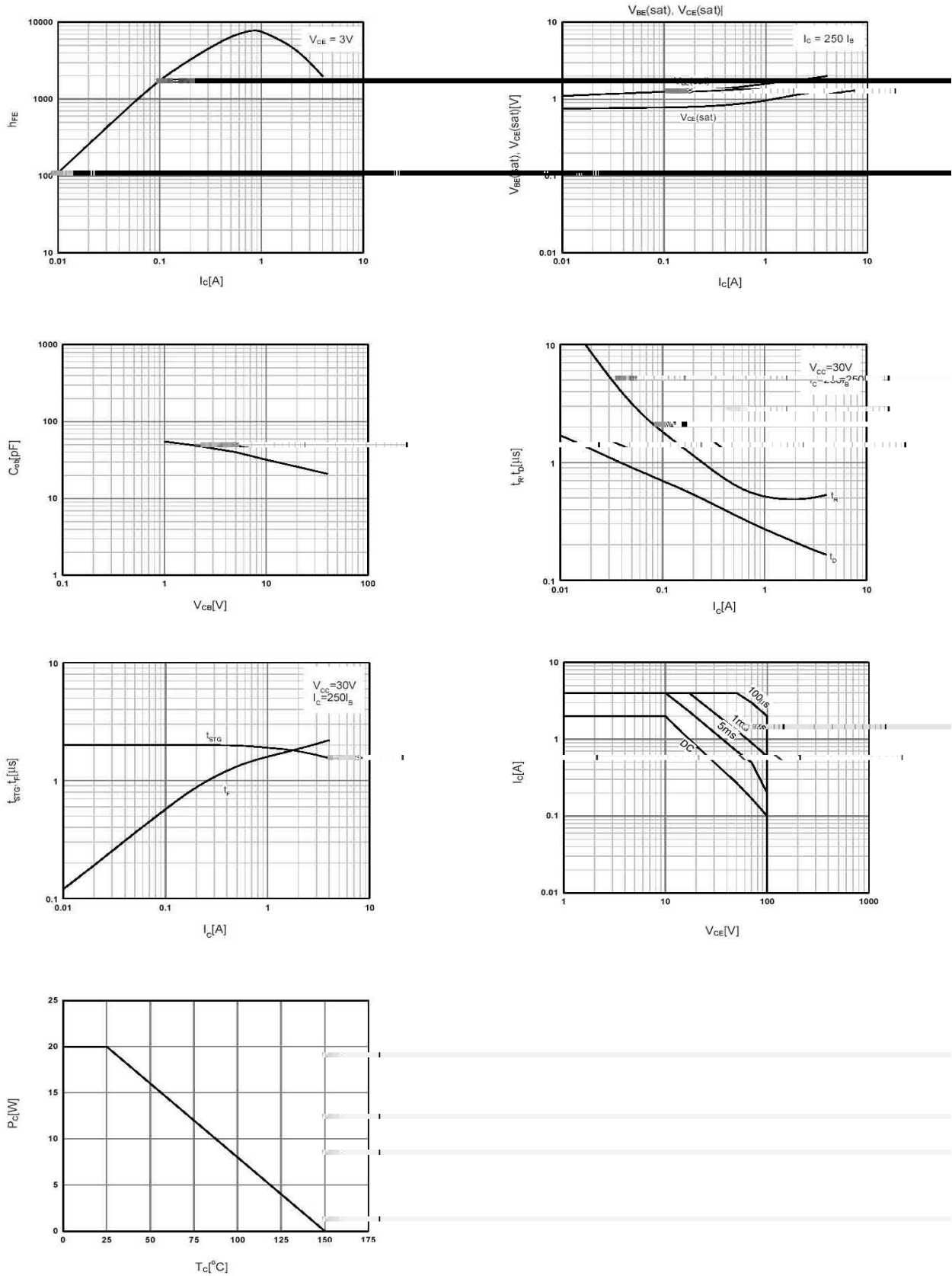
Pulse Test:PW 300 s,Duty Cycle 2%

/ Electrical Characteristics(Ta=25)

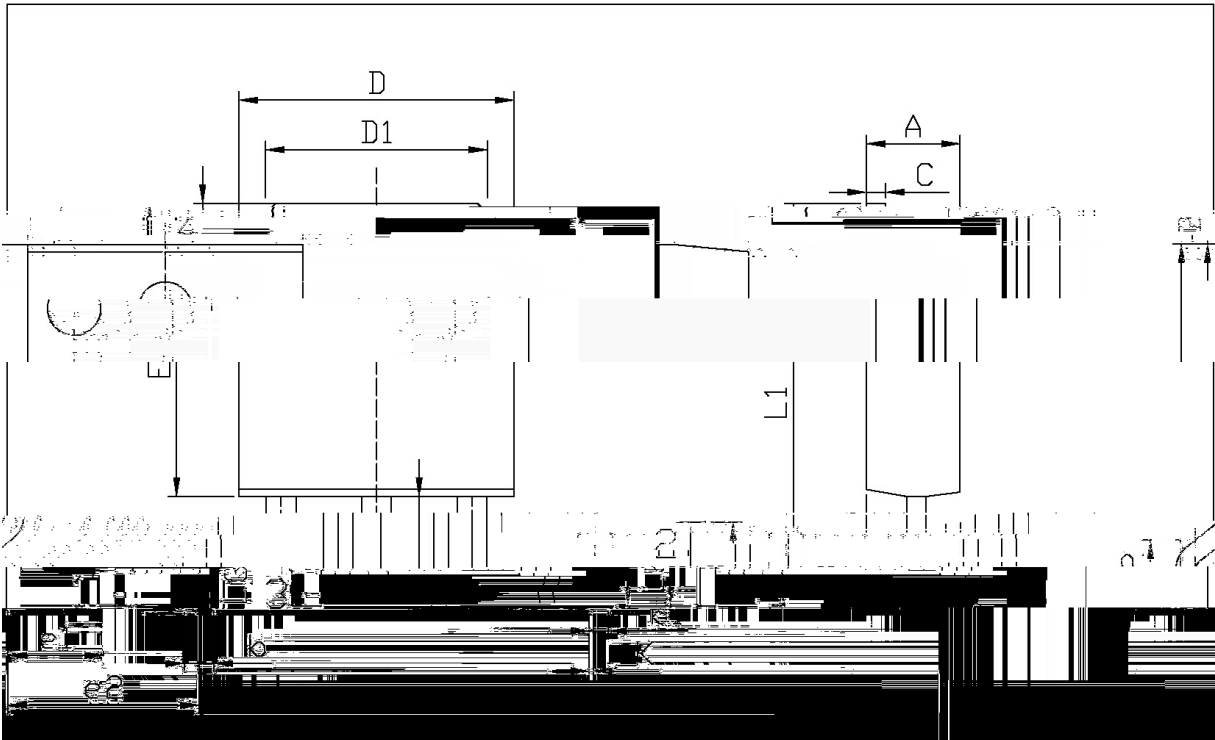
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage*	V _{CEO} *	I _C =10mA I _B =0	100			V
Collector Cut-Off Current	I _{CEO}	V _{CE} =50V I _B =0			0.02	mA
Collector Cut-Off Current	I _{CBO}	V _{CB} =100V I _E =0			0.02	mA
Emitter Cut-Off Current	I _{EBO}	V _{EB} =5.0V I _C =0			2.0	mA
DC Current Gain	h _{FE(1)} *	V _{CE} =3.0V I _C =2.0A	1000		12K	
	h _{FE(2)} *	V _{CE} =3.0V I _C =0.5A	500			
	h _{FE(3)} *	V _{CE} =3.0V I _C =4.0A	200			
Collector-Emitter Saturation Voltage	V _{CE(sat)1} *	I _C =2.0A I _B =8.0mA			2.0	V
	V _{CE(sat)2} *	I _C =4.0A I _B =40mA			3.0	V
Base-Emitter Saturation Voltage*	V _{BE(sat)} *	I _C =4.0A I _B =40mA			4.0	V
Base-Emitter-On Voltage*	V _{BE(on)} *	V _{CE} =3.0V I _C =2.0A			2.8	V
Current Gain Bandwidth Product	f _T	V _{CE} =10V I _C =0.75A	25			MHz
Output Capacitance	C _{ob}	V _{CB} =10V f=0.1MHz I _E =0			100	pF

*Pulse Test:Pulse Width 380us,Duty Cycle 2%. * ≤380us, ≤2%

/ Electrical Characteristic Curve



/ Package Dimensions

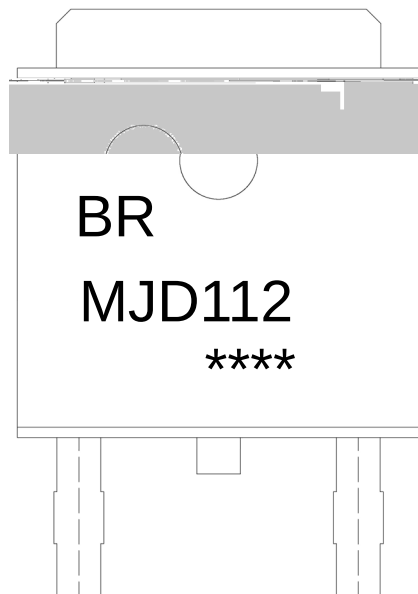


单位：mm

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	2.20	2.40	E	5.95	6.25
B	0.95	1.25	e1	2.24	2.34
b	0.50	0.90	e2	4.43	4.73
b1	0.45	0.55	L1	9.45	9.95
C	0.45	0.55	L2	1.25	1.75
D	6.45	6.75	L3	0.60	0.90
D1	5.10	5.50	K	0.00	0.10

T0-252

/ Marking Instructions



BR

MJD112

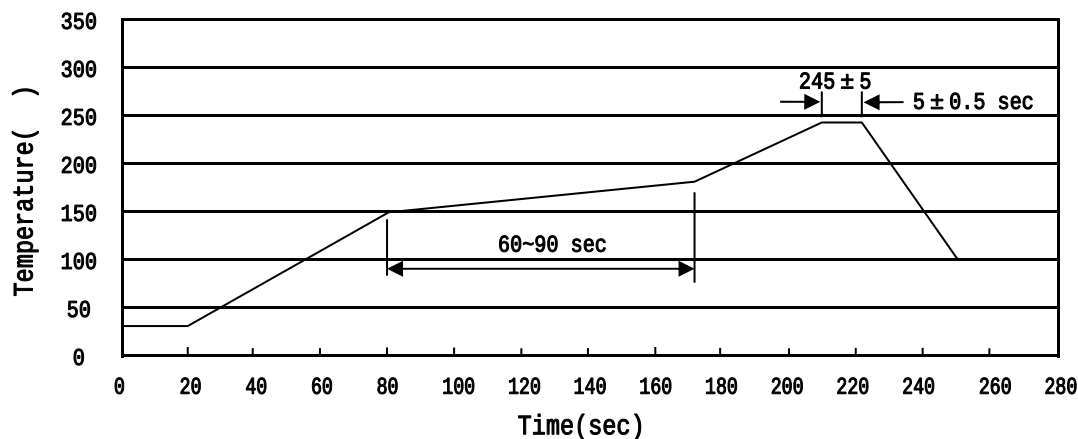
Note:

BR: Company Code

MJD112: 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	Units					Dimension (unit mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
TO-252	2,500	2	5,000	6	30,000	13 ×16	360×360×50	380×335×366

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
	Units/Tube	Tubes/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Tube	Inner Box	Outer Box
TO-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180

/ Notices