

/ Descriptions

Silicon NPN transistor in a TO-252 Plastic Package.

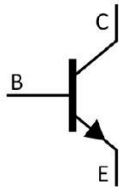
/ Features

Excellent h_{FE} linearity, low $V_{CE(sat)}$, complements the 2SB1412.

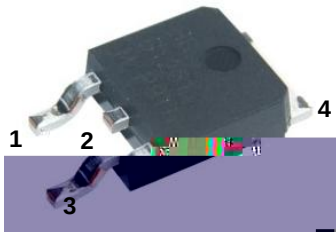
/ Applications

Strobe flash applications, medium power amplifier applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2,4 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	Q	R
h_{FE} Range	120 270	180 390

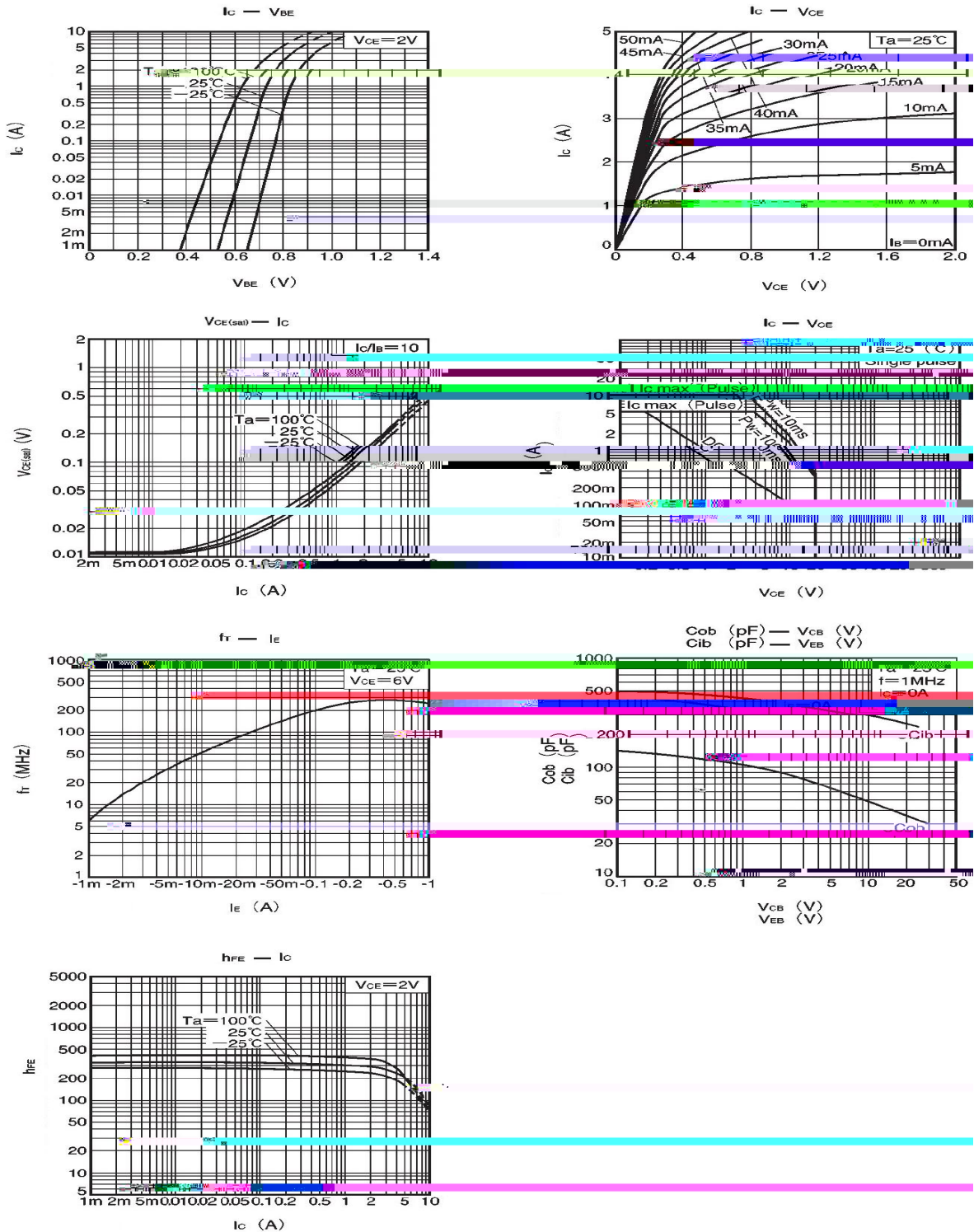
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	50	V
Collector to Emitter Voltage	V_{CEO}	20	V
Emitter to Base Voltage	V_{EBO}	6.0	V
Collector Current - Continuous	I_C	5.0	A
Peak Collector Current – Continuous	I_{CM}	10	mA
Collector Power Dissipation	P_C	1.0	W
Collector Power Dissipation	$P_C(T_C=25)$	10	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

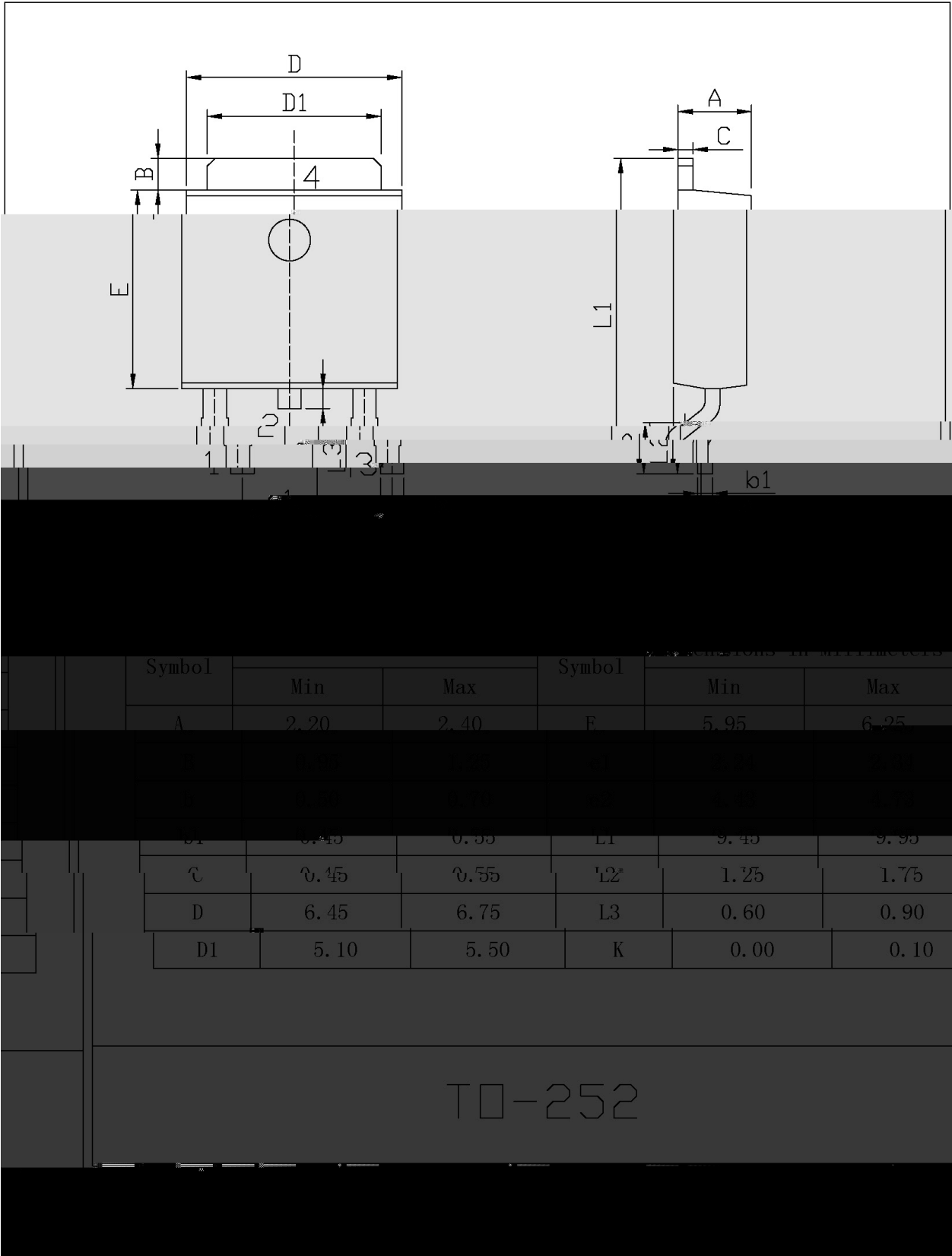
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=50 A \quad I_E=0$	50			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=1.0mA \quad I_B=0$	20			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=50 A \quad I_C=0$	6.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=40V \quad I_E=0$			0.5	A
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5.0V \quad I_C=0$			0.5	A
DC Current Gain	h_{FE}	$V_{CE}=2.0V \quad I_C=0.5A$	120		390	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=4.0A \quad I_B=0.1A$		0.25	1.0	V
Transition Frequency	f_T	$V_{CE}=6.0V \quad I_C=50mA$ $f=100MHz$		150		MHz
Collector output capacitance	C_{ob}	$V_{CE}=20V \quad I_C=0$ $f=1.0MHz$		30		pF

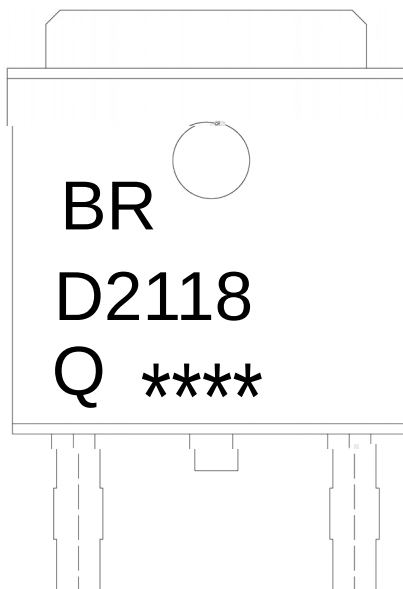
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



BR

h_{FE}

Note:

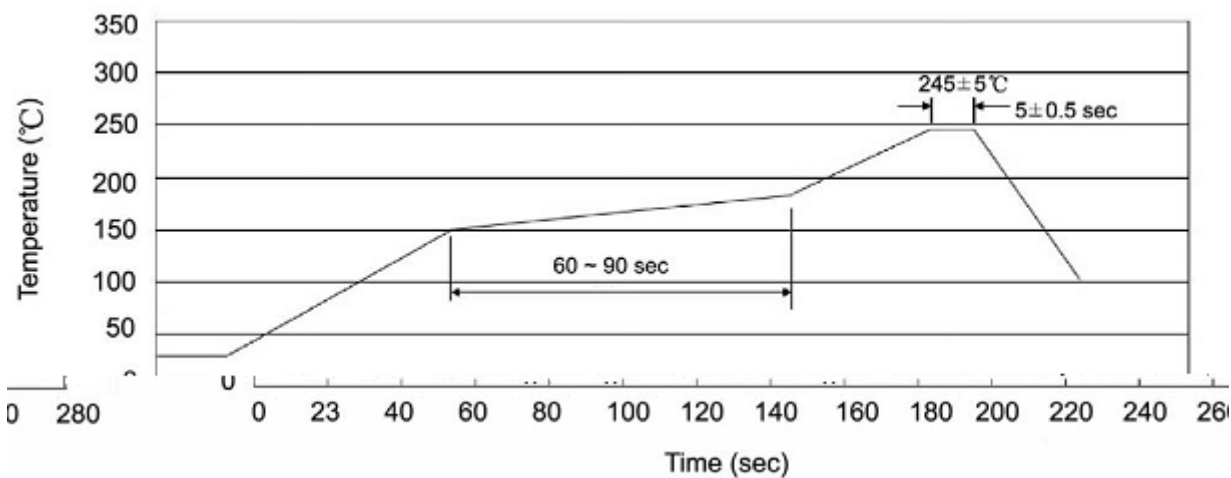
BR: Company Code

D2118: Product Type.

Q: h_{FE} Classifications Symbol

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

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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)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
TO-252	2,500	2	5,000	5	25,000	13 ×16	360×360×50	385×257×392

/ TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Tube 只/套管	Tubes/Inner Box 套管/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Tube 套管	Inner Box 盒	Outer Box 箱
TO-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180

/ Notices