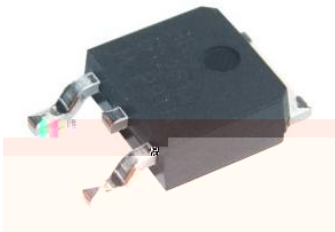
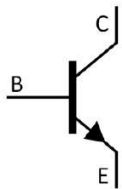


Silicon NPN transistor in a TO-252 Plastic Package.

Low $V_{CE(sat)}$, high current and high f_T , excellent linearity of h_{FE} , fast switching time.

Relay drivers, high-speed inverters, general high-current switching applications.



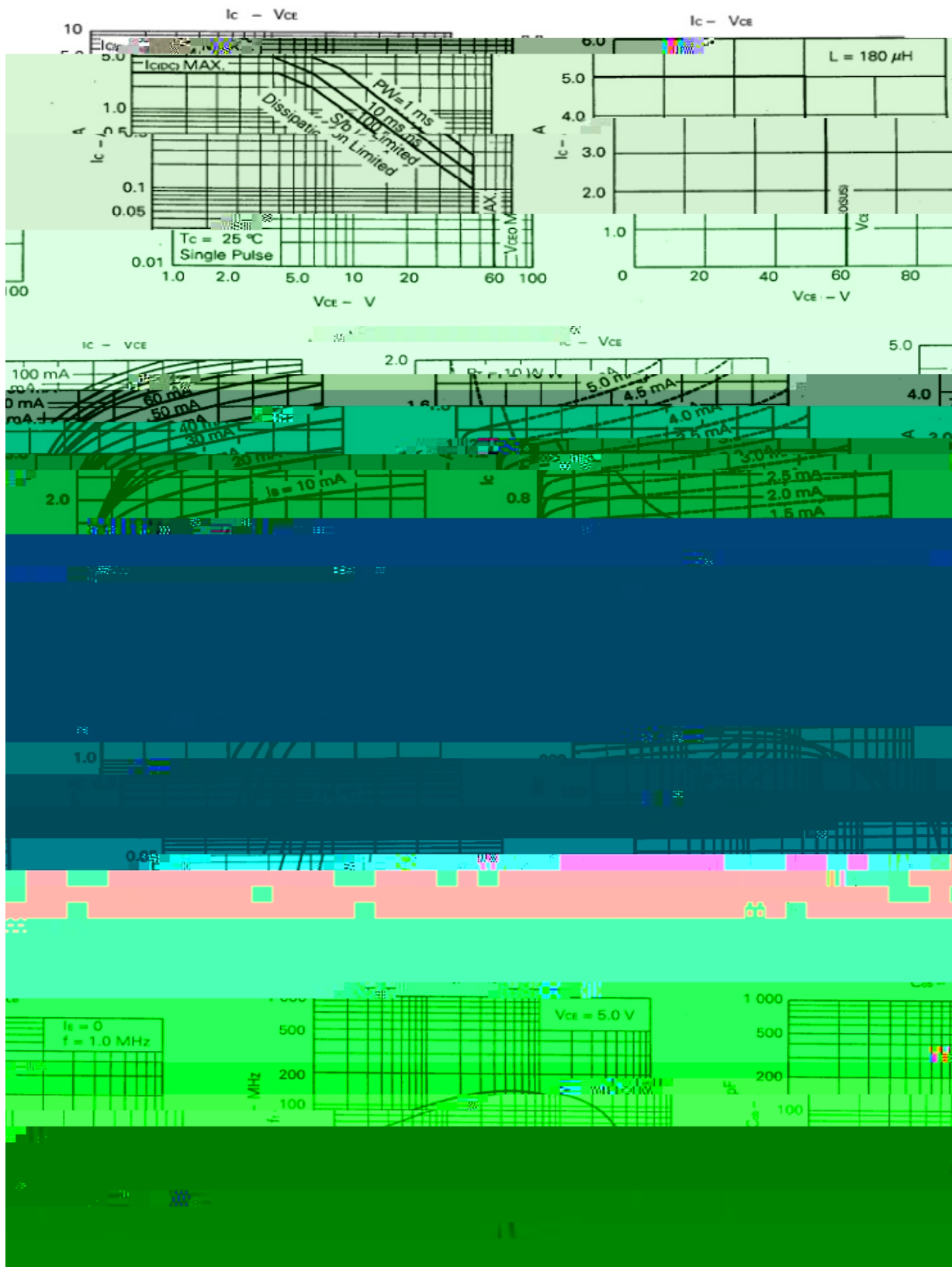
PIN1 Base PIN 2,4 Collector PIN 3 Emitter

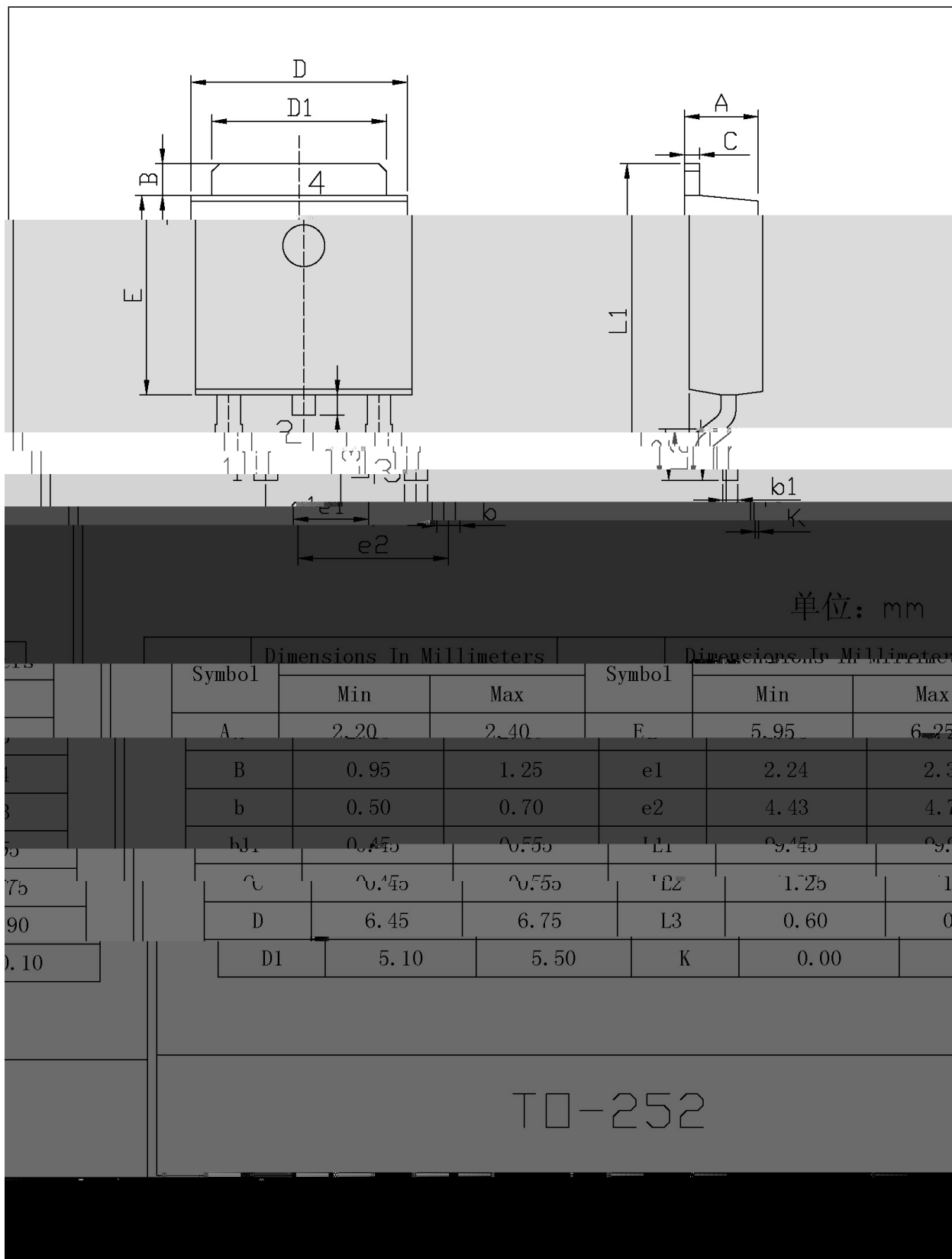
h_{FE} Classifications Symbol	M	L	K
h_{FE} Range	100 200	160 320	200 400

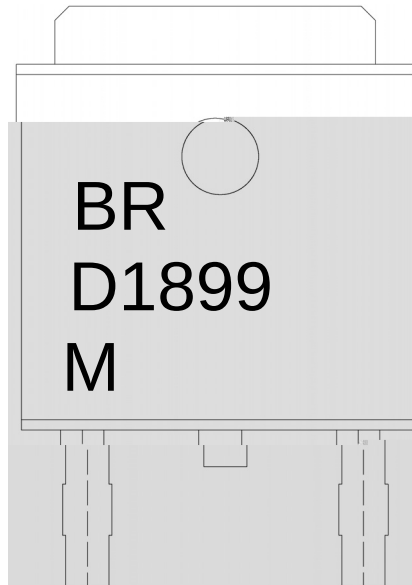
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	60	V
Collector to Emitter Voltage	V_{CEO}	60	V
Emitter to Base Voltage	V_{EBO}	7.0	V
Collector Current - Continuous	I_C	3.0	A
Collector Power Dissipation*	$*P_C$	2.0	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55 150	°C

*When mounted on a 7.5×7.5×0.7mm ceramic board

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=100\text{ A}$ $I_E=0$	60			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=1.0\text{mA}$ $I_B=0$	60			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=100\text{ A}$ $I_C=0$	7.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=60\text{V}$ $I_E=0$			10.0	A
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=7.0\text{V}$ $I_C=0$			10.0	A
DC Current Gain	$h_{FE(1)}$	$V_{CE}=2.0\text{V}$ $I_C=600\text{mA}$	100		400	
	$h_{FE(2)}$	$V_{CE}=2.0\text{V}$ $I_C=200\text{mA}$	60			
	$h_{FE(3)}$	$V_{CE}=2.0\text{V}$ $I_C=2.0\text{A}$	50			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1.5\text{A}$ $I_B=150\text{mA}$			0.25	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=1.5\text{A}$ $I_B=150\text{mA}$			1.2	V
Transition Frequency	f_T	$V_{CE}=5.0\text{V}$ $I_C=1.5\text{A}$		120		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}$ $I_E=0$ $f=1.0\text{MHz}$		30		pF
Turn-On Time	t_{on}	$V_{CC}=10\text{V}$ $I_C=1\text{A}$ $I_{B1}=-I_{B2}=-0.1$			0.5	s
Storage Time	t_{stg}				2.0	s
Fall Time	t_f				0.5	s







BR

h_{FE}

Note:

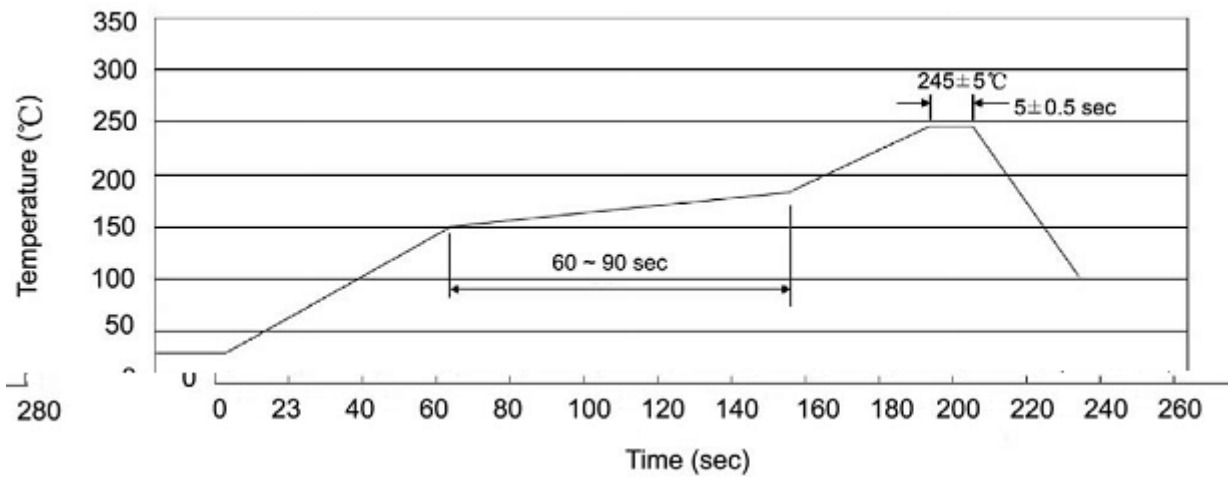
BR: Company Code

D1899: Product Type.

M: h_{FE} Classifications Symbol

****: 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.

260 5

10 1 sec.

Temp.:260±5°C

Time:10±1 sec

/ REEL

Package Type	Units					Dimension (unit mm ³)		

/ TUBE

Package Type	Units					Dimension (unit mm ³)		