

Rev.A Oct.-2023

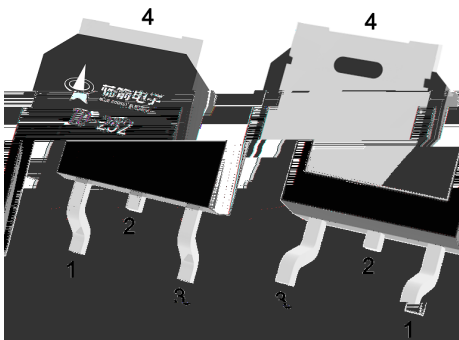
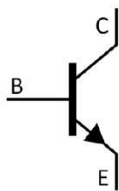
TO-252 NPN

Silicon NPN transistor in a TO-252 Plastic Package.

BRMJD42CQ AEC-Q101

Complement to BRMJD42CQ, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

Medium power linear switching applications, Meet the stringent requirements of automotive applications.

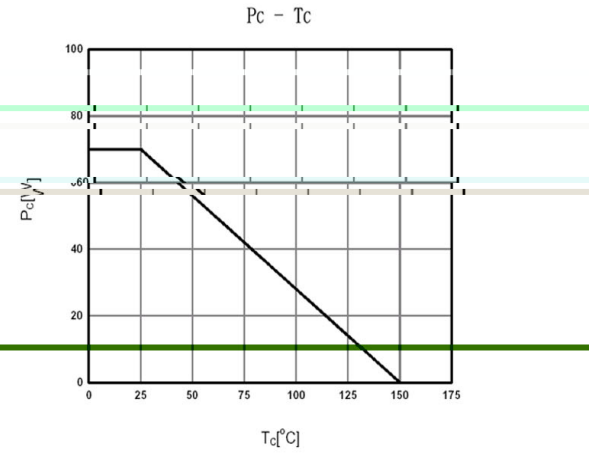
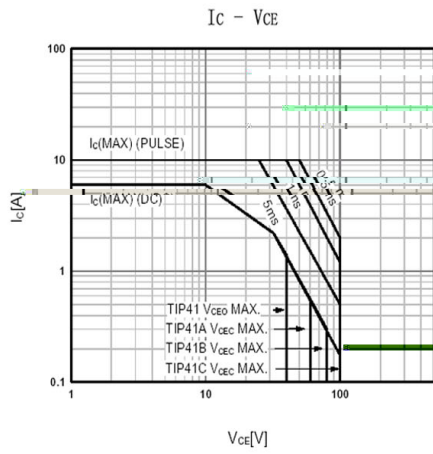
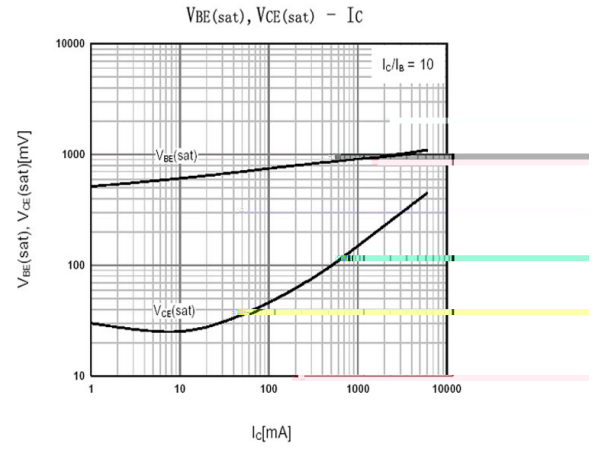
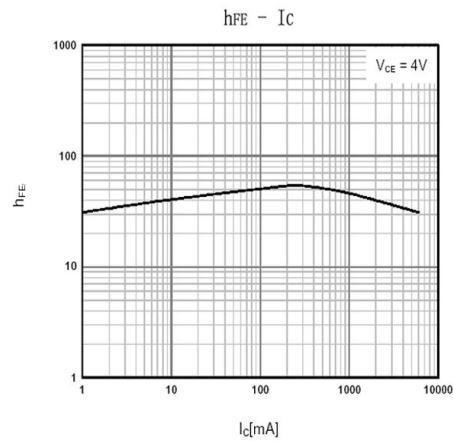


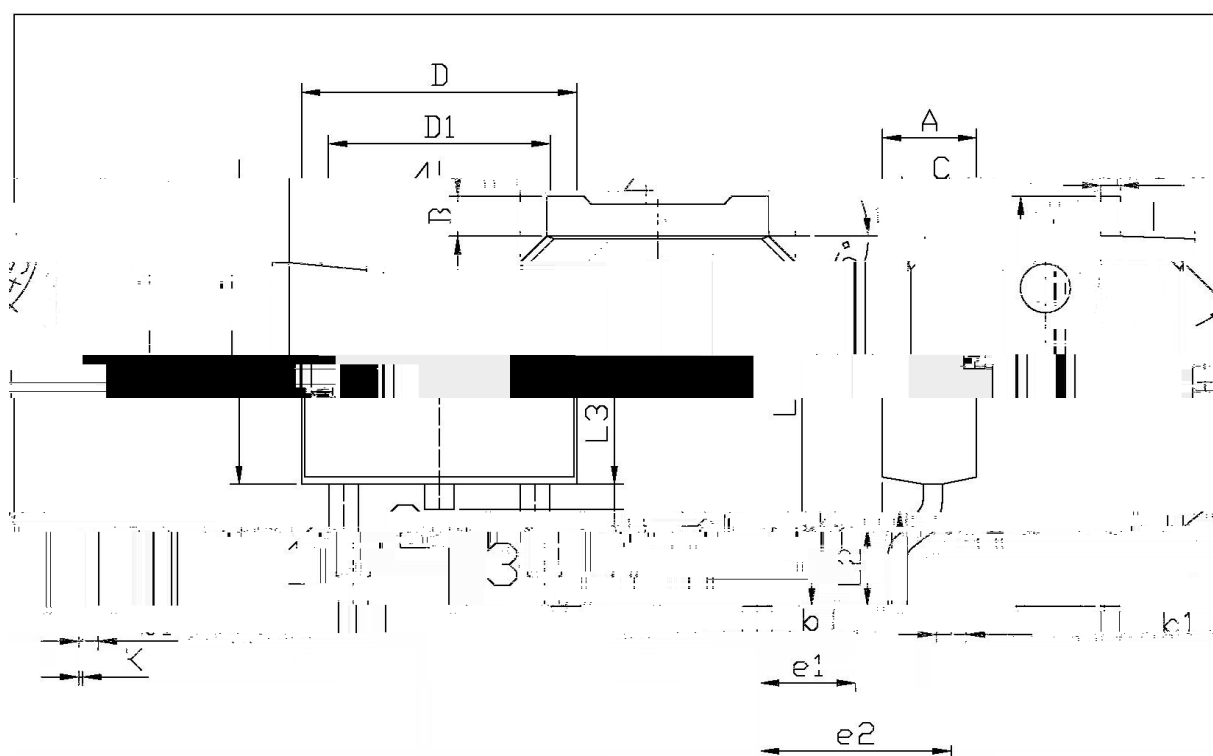
PIN1 Base PIN 2,4 Collector
 $I_{CQ} @ 40^{\circ}C = 1.5A$ $V_{CE} = 70V$

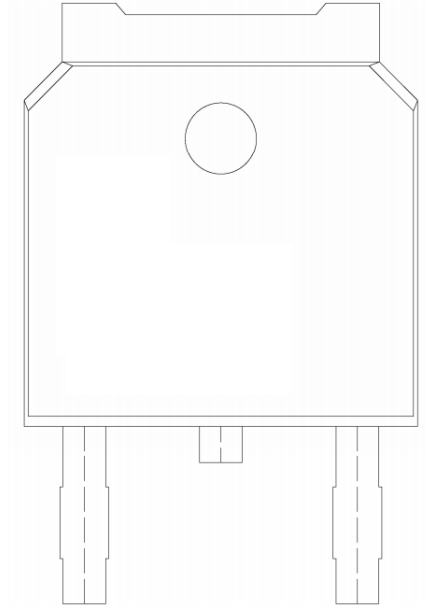
PIN 3 Emitter

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	6.0	A
Base Current - Continuous	I_B	2.0	A
Collector Power Dissipation	P_D	1.75	W
Collector Power Dissipation	$P_D(T_C=25^\circ\text{C})$	20	W
Junction Temperature	T_J	150	
Storage Temperature Range	T_{stg}	-55 150	

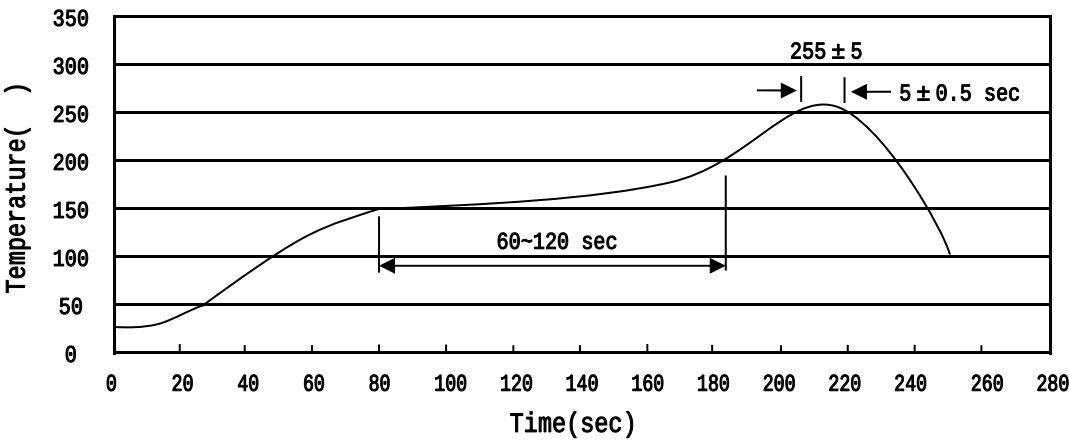
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=30\text{mA}$ $I_B=0$	100			V
Collector Cut-Off Current	I_{CEO}	$V_{CE}=60\text{V}$ $I_B=0$			50	μA
Collector Cut-Off Current	I_{CES}	$V_{CE}=100\text{V}$ $V_{BE}=0$			10	μA
Emitter Cut-Off Current	I_{EBO}	$V_{BE}=5.0\text{V}$ $I_C=0$			0.5	mA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=4.0\text{V}$ $I_C=3.0\text{A}$	15		75	
	$h_{FE(2)}$	$V_{CE}=4.0\text{V}$ $I_C=0.3\text{A}$	30			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=6.0\text{A}$ $I_B=600\text{mA}$			1.5	V
Base to Emitter On Voltage	$V_{BE(on)}$	$V_{CE}=6.0\text{V}$ $I_C=4.0\text{A}$			2.0	V
Current- Gain Bandwidth Product	f_T	$V_{CE}=10\text{V}$ $I_C=500\text{mA}$	3			MHz







Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- 1

150 200

60 120sec;

1.Preheating:150~200 , Time:60~120sec.
- 2

255±5

5±0.5sec;

2.Peak Temp.:255±5 , Duration:5±0.5sec.
- 3

2 10 /sec.

3. Cooling Speed: 2~10 /sec.

260±5

10±1 sec.

Temp.:260±5

Time:10±1 sec

/ 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