

Rev.A Oct.-2023

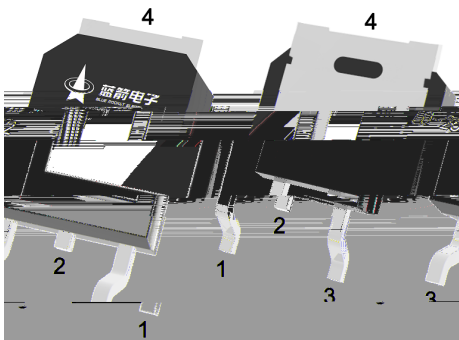
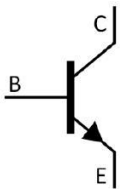
TO-252 NPN

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.

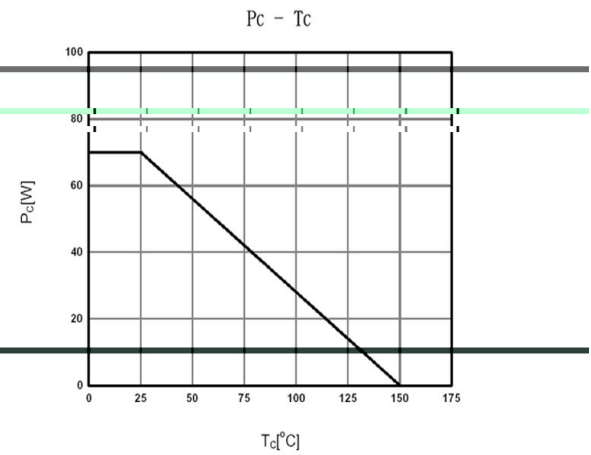
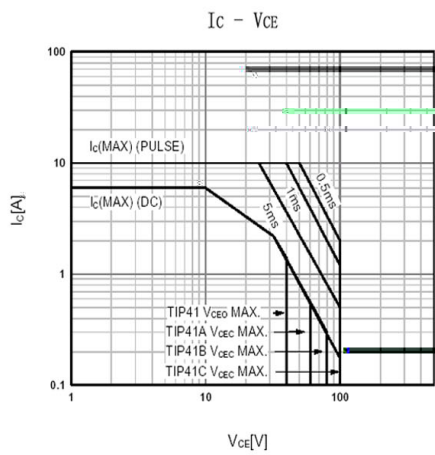
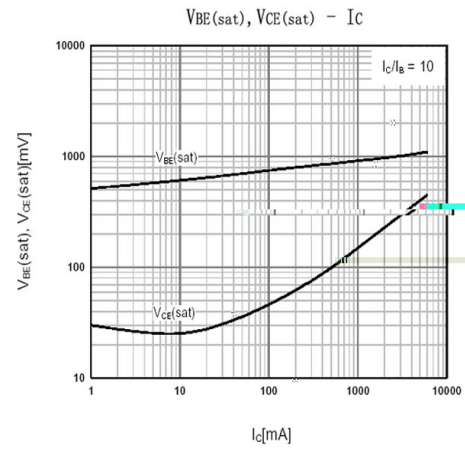
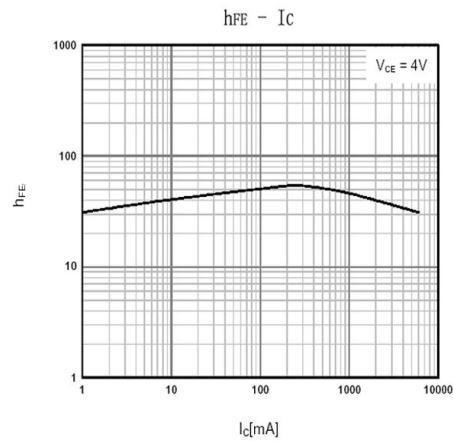
Medium power linear switching applications, Meet the stringent requirements of automotive applications.

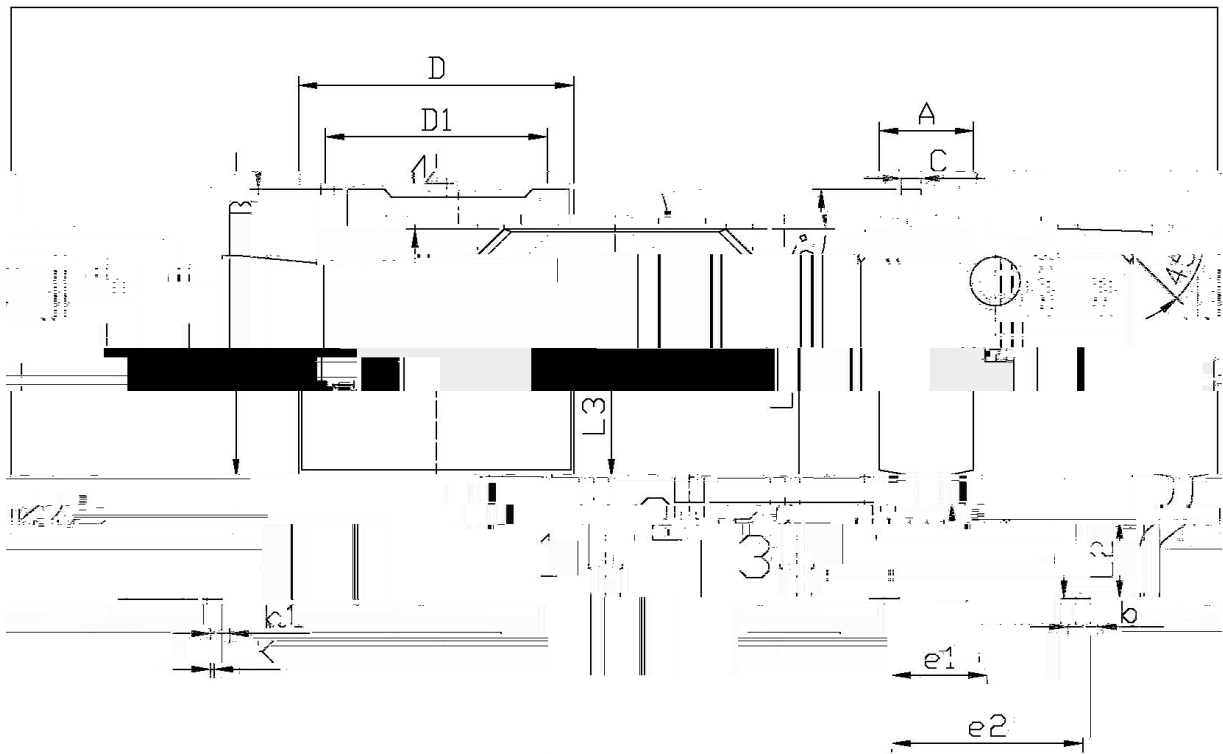


PIN1 Base PIN 2,4 Collector PIN 3 Emitter

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



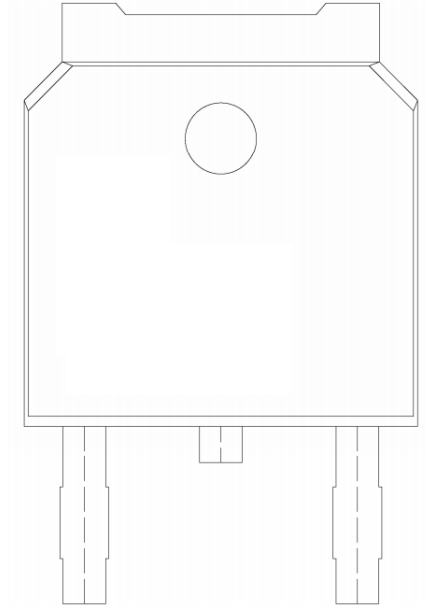


单位: mm

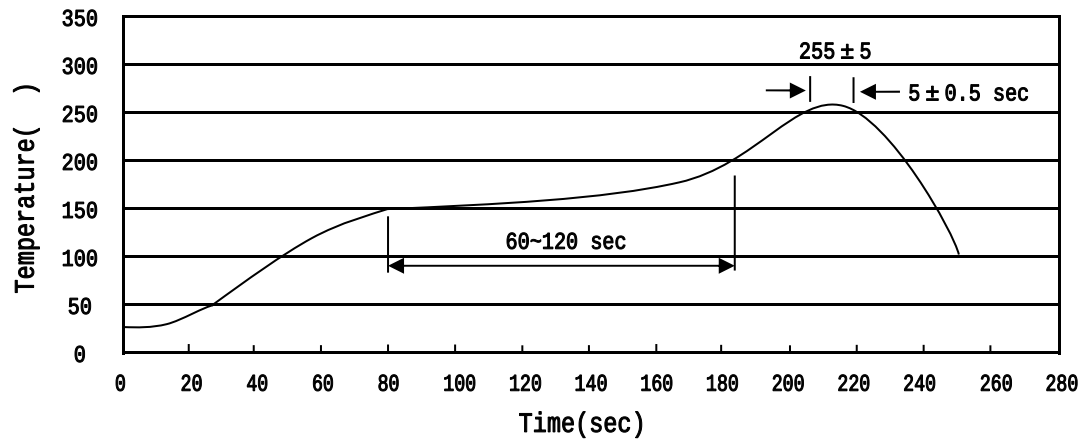
Dimensions In Millimeters			Dimensions In Millimeters		
Symbol	Min	Max	Symbol	Min	Max
E	5.95	6.25	A	2.20	2.40
e1	2.24	2.34	B	0.95	1.25
F1	0.55	0.85	C	0.70	0.90
G	0.45	0.55	D	6.45	6.75
H	0.60	0.90	D1	5.10	5.50
K	0.00	0.10			

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T0-25



Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

1. Preheating: 150~200 , Time: 60~120sec.
2. Peak Temp.: 255 ± 5 , Duration: 5 ± 0.5sec.
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