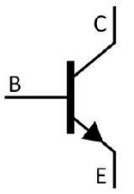
TO-252 NPN

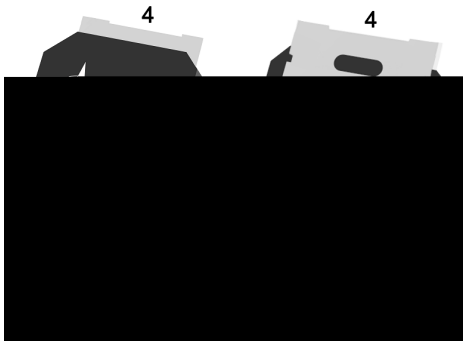
Silicon NPN transistor in a TO-252 Plastic Package.

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.



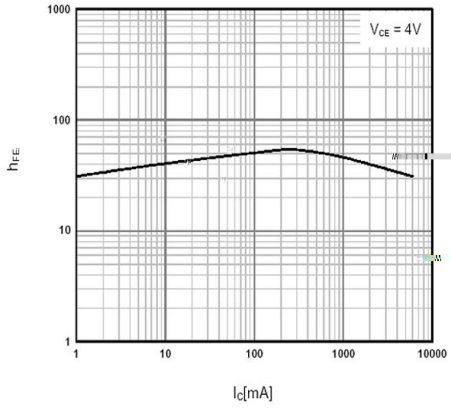


PIN1 Base PIN 2,4 Collector PIN 3 Emitter

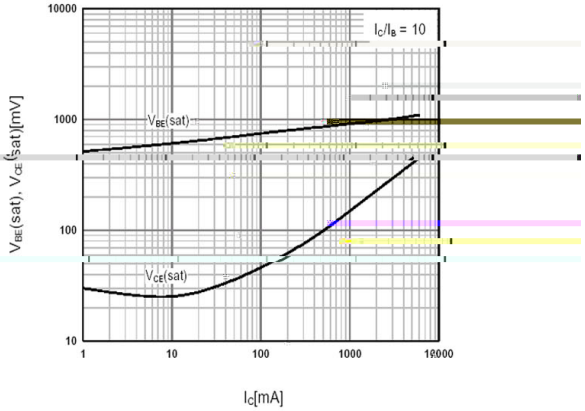
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	100	V
Collector to Emitter Voltage	V_{CEO}	100	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	6.0	A
Base Current - Continuous	I_B	2.0	A
Collector Power Dissipation	P_D	1.75	W
Collector Power Dissipation	$P_D(T_C=25$)	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=30mA I_B=0	100			V
Collector Cut-Off Current	I_{CEO}	V_{CE}=60V I_B=0			50	μA
Collector Cut-Off Current	I_{CES}	V_{CE}=100V V_{BE}=0			10	μA
Emitter Cut-Off Current	I_{EBO}	V_{BE}=5.0V I_C=0			0.5	mA
DC Current Gain	$h_{FE(1)}$	V_{CE}=4.0V I_C=3.0A	15		75	
	$h_{FE(2)}$	V_{CE}=4.0V I_C=0.3A	30			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=6.0A I_B=600mA			1.5	V
Base to Emitter On Voltage	$V_{BE(on)}$	V_{CE}=6.0V I_C=4.0A			2.0	V
Current- Gain Bandwidth Product	f_T	V_{CE}=10V I_C=500mA	3			MHz

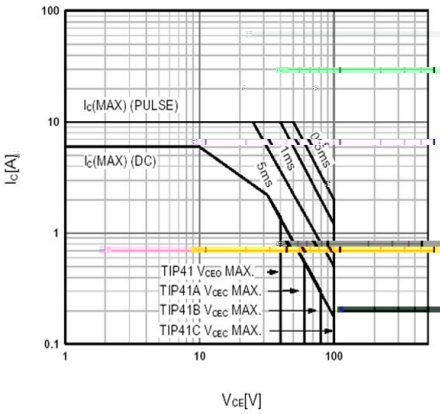
hFE - Ic



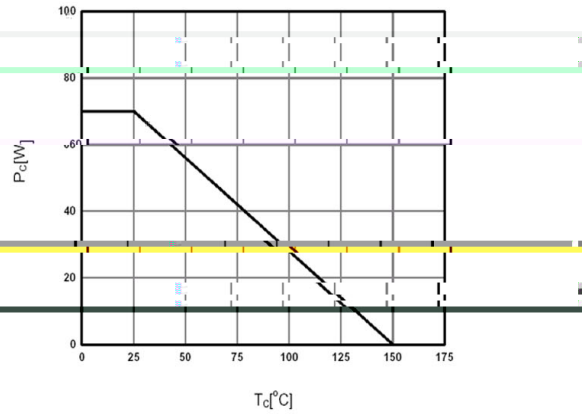
VBE(sat), VCE(sat) - Ic

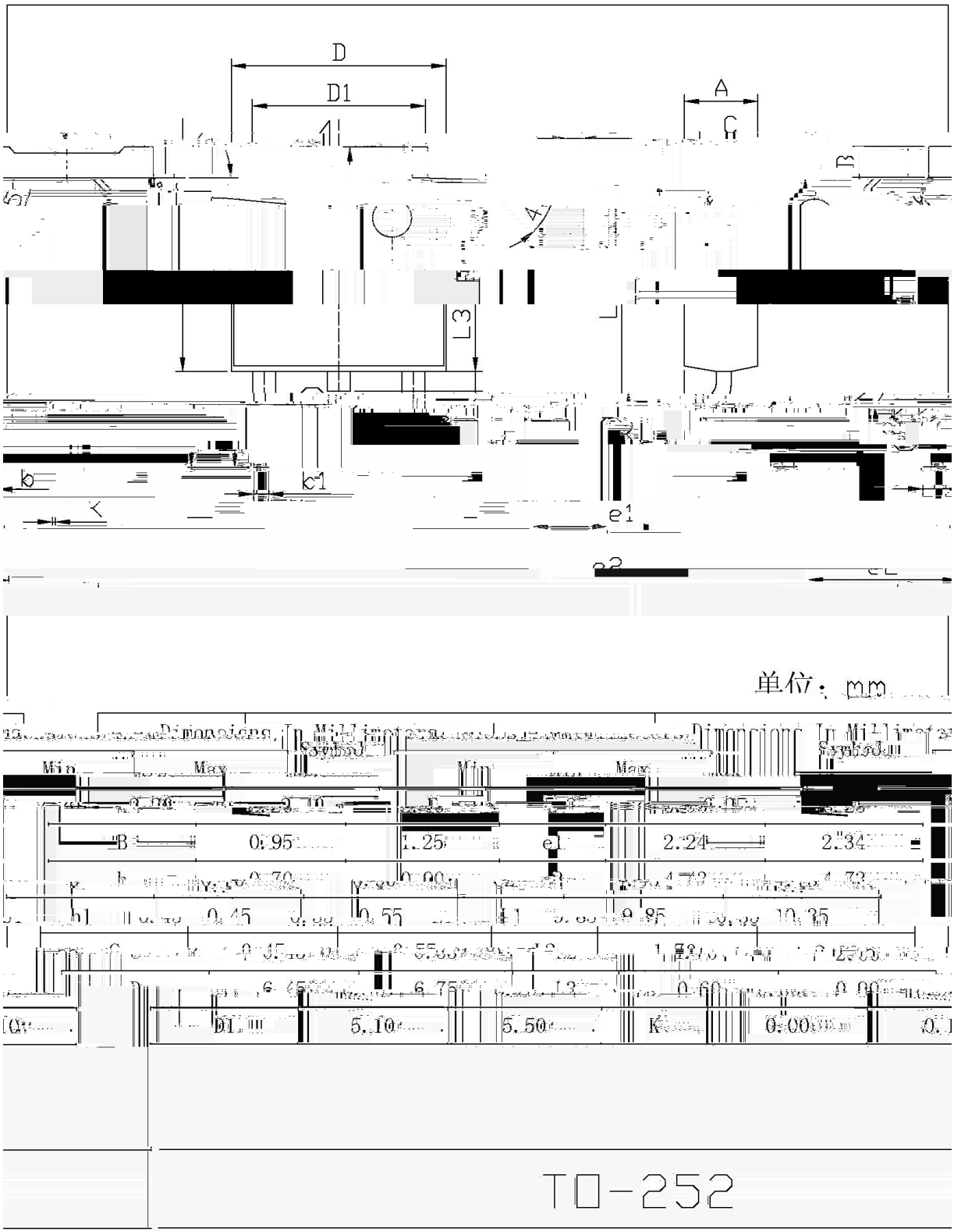


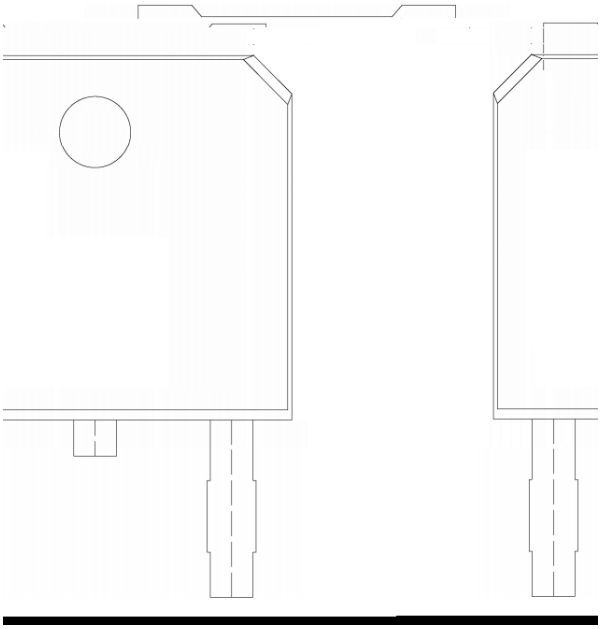
Ic - VCE



PC - TC




D
D1
A
L3
b
c1
e1
e2
单位：mm
Dimensions In Millimeters
Symbol
Min
Max
B
0.95
1.25
e1
2.24
2.34
h1
0.45
0.55
9.85
10.35
6.45
6.75
L3
0.60
D1
5.10
5.50
K
0.00
TO-252



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：mm³)