

/ Descriptions

TO-252

NPN

Silicon NPN transistor in a TO-252 Plastic Package.

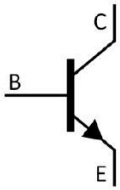
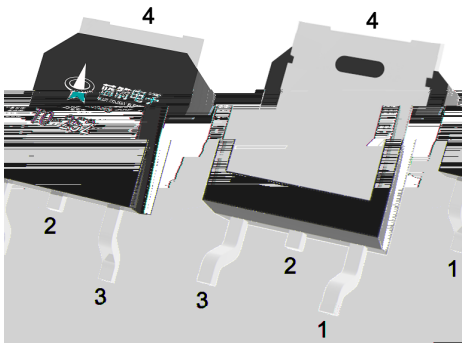
/ Features

AEC-Q101

High collector-Emitter breakdown voltage, Suitable for transformer, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

/ Applications

High voltage general purpose applications, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit**/ Pinning**

PIN1 Base

PIN 2,4 Collector

PIN 3 Emitter

/ h_{FE} Classifications & Marking

See Marking Instructions.

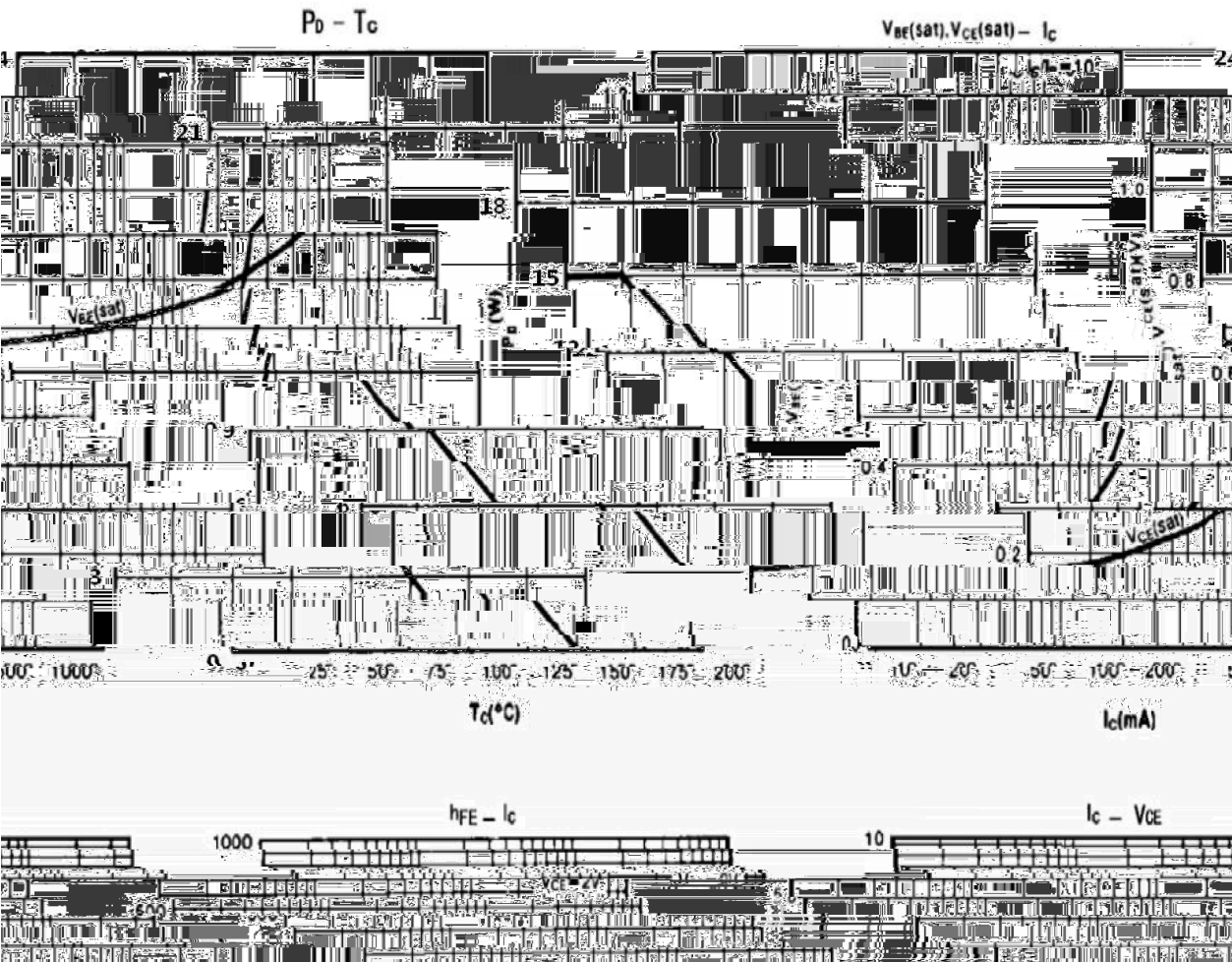
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	300	V
Collector to Emitter Voltage	V_{CEO}	300	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	500	mA
Collector Power Dissipation	P_C	1.56	W
Collector Power Dissipation	$P_C(T_C=25)$	15	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}	$I_C=0.1mA$ $I_E=0$	300			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=1.0mA$ $I_B=0$	300			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=0.1mA$ $I_C=0$	5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=300V$ $I_E=0$			100	μA
Emitter Cut-Off Current	I_{EBO}	$V_{CE}=3V$ $I_C=0$			100	μA
DC Current Gain	h_{FE}	$V_{CE}=10V$ $I_C=50mA$	30		240	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=50mA$ $I_B=5.0mA$			1.0	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=50mA$ $I_B=5.0mA$			1.2	V

/ Electrical Characteristic Curve



Technical drawing of a mechanical part, likely a bracket or support, showing dimensions and labels. The drawing includes a side view (top) and a front view (bottom).

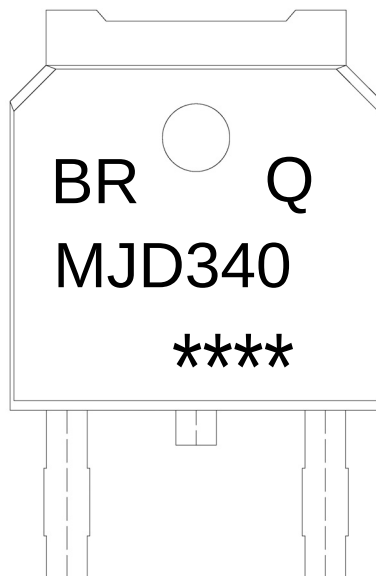
Dimensions and Labels:

- Top View (Side View):**
 - D:** Total width.
 - D1:** Width of the central section.
 - B:** Height of the central section.
 - 4:** Thickness of the central section.
 - A:** Width of the rightmost section.
 - C:** Width of the rightmost section.
 - 45°:** Angle of the sloped surface.
 - E:** Height of the rightmost section.
- Front View (Bottom View):**
 - 1:** Length of the central section.
 - 2:** Length of the rightmost section.
 - 3:** Length of the leftmost section.
 - 4:** Thickness of the central section.
 - 5:** Thickness of the rightmost section.
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 - 98:** Thickness of the rightmost section.
 - 99:** Thickness of the leftmost section.
 - 100:** Thickness of the central section.

C		Dimensions In Millimeters		Dimensions In Millimeters	
Max	Min	Max	Min	Max	Min
6.25	A	2.20	2.40	E	5.95
2.34	B	0.95	1.25	e1	2.24
0.72	h	0.70	0.90	e2	4.43
10.35	h1	0.45	0.55	L1	9.85
C		0.45	0.55	L2	2.00
0.90	D1	6.45	6.75	L3	0.60
0.10	D11	5.10	5.50	K	0.00

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/ Marking Instructions



BR

Q

MJD340

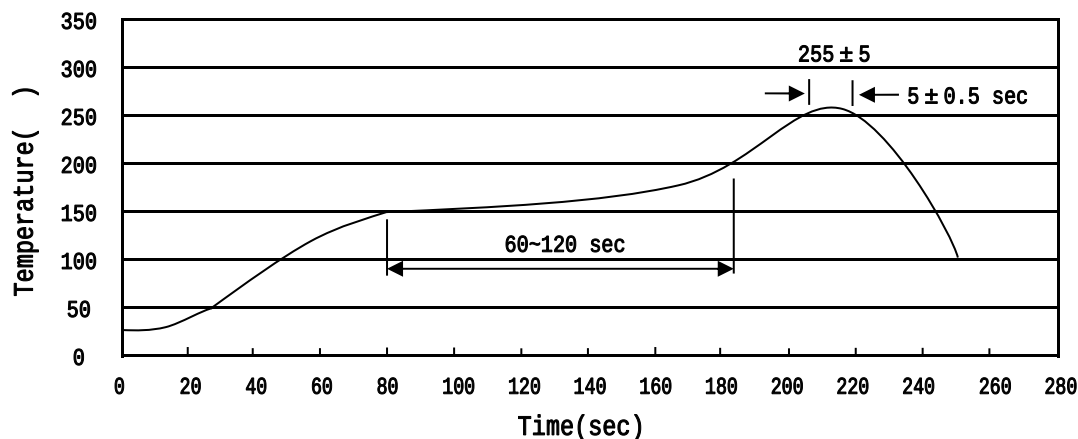
Note:

BR: Company Code

Q: Automobile halogen-free product Code

MJD340: Product Type

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

() / 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. |

/ Resistance to Soldering Heat Test Conditions

260±5

10±1 sec.

Temp.:260±5

Time:10±1 sec

/ Packaging SPEC.
/ 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

/ Notices