

/ Revised record

			I _{CBO} I _{EBO} 10μA 改为 1μA		

/ Descriptions

Silicon NPN transistor in a TO-252 Plastic Package.

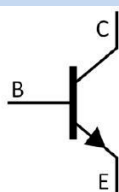
/ Features

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

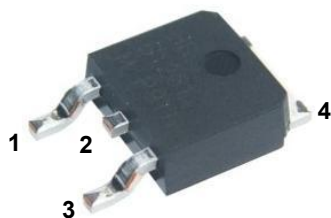
/ Applications

Relay drivers,high-speed inverters,converters,and other general high-current switching applications,
Meet the stringent requirements of automotive applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2,4 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	Q	R	S	T
h_{FE} Range	70-140	100-200	140-280	200-400



Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	120	V
Collector to Emitter Voltage	V_{CEO}	100	V
Emitter to Base Voltage	V_{EBO}	6	V
Collector Current - Continuous	I_C	3	A
Collector Current – Continuous(Pulse)	I_{CP}	6	A
Collector Power Dissipation	P_C	1	W
Collector Power Dissipation	$P_C(T_C=25^{\circ}C)$	10	W
Junction Temperature	T_j	150	$^{\circ}C$
Storage Temperature Range	T_{stg}	-55~150	$^{\circ}C$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{EBO}	$I_C=10\mu A$ $I_E=0$	120			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=1mA$ $I_B=0$	100			V
Emitter to Base Breakdown Voltage	V_{EBO}	I				

/ Electrical Characteristic Curve

Fig. 1 - Static Characteristics

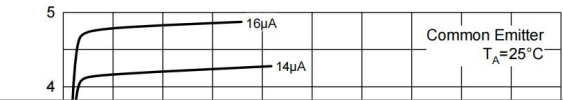


Fig. 2 - DC Current Gain Characteristics

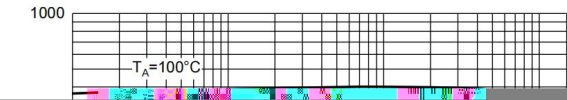


Fig. 3 - Collector-Emitter Saturation Voltage

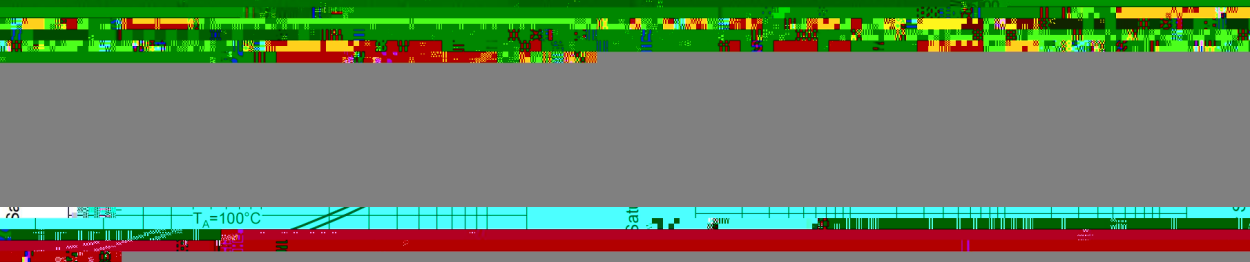


Fig. 5 - Base-Emitter Voltage Characteristics

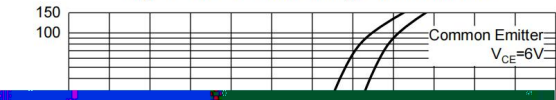
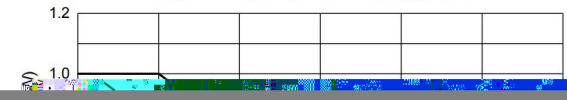
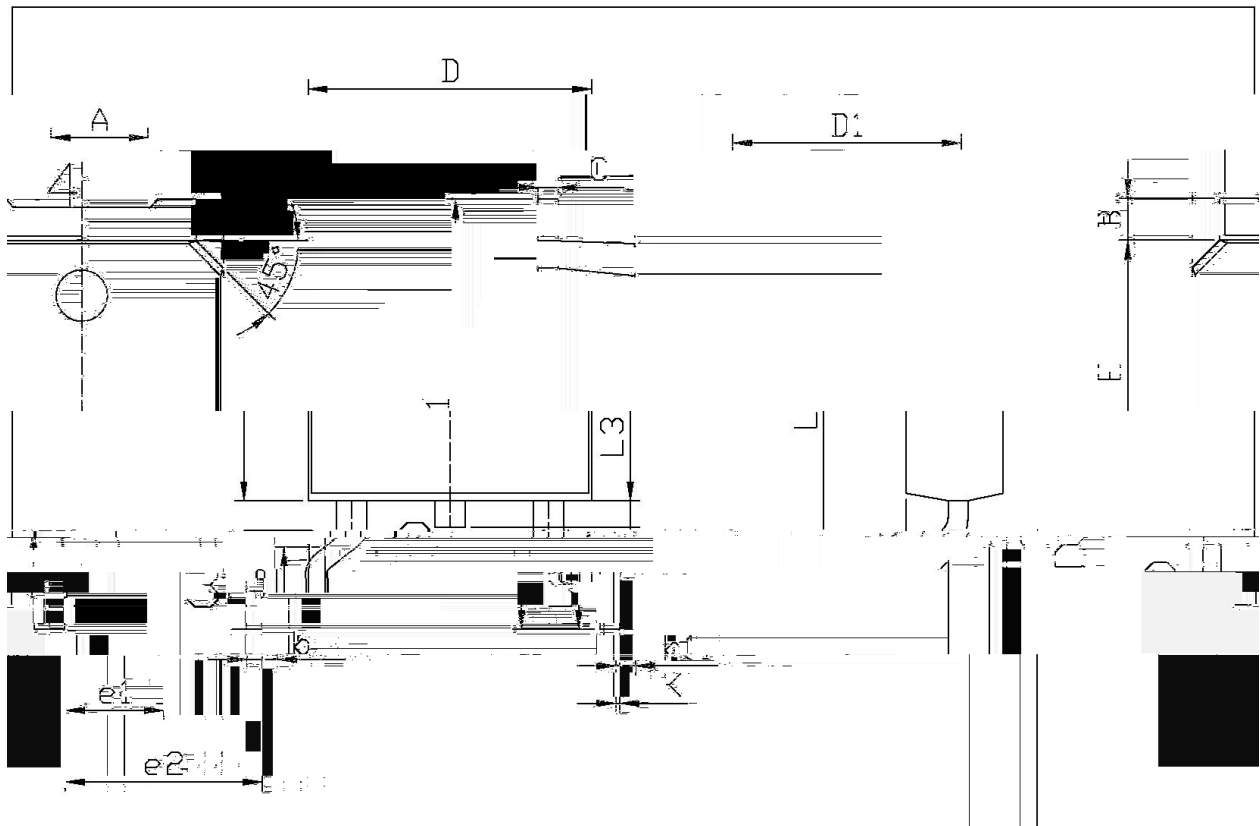


Fig. 6 - Collector Power Derating Curve



/ Package Dimensions

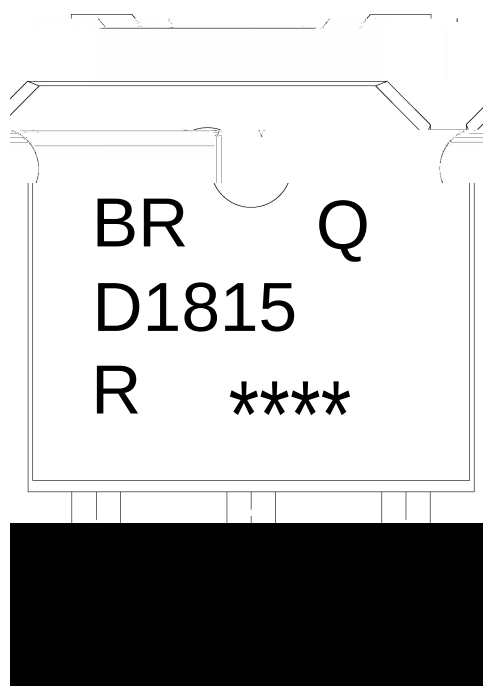


单位: mm

Dimensions in Millimeters				Dimensions in Millimeters			
Max	Symbol	Min	Max	Min	Symbol	Max	Min
2.40	A	1.95	3.25	2.20	A	2.20	
1.25	e1	2.24	2.34	0.95	B		
0.90	e2	4.43	4.73	0.70	b		
0.55	L1	9.85	10.35	0.45	b1		
0.60		0.90	0.55	0.40		0.70	0.62
0.00	0.10		D	6.45		6.75	L3
			D1	5.10		5.50	K

T0-252

/ Marking Instructions



BR

Q

D1815

R: h_{FE}

Note:

BR: Company Code

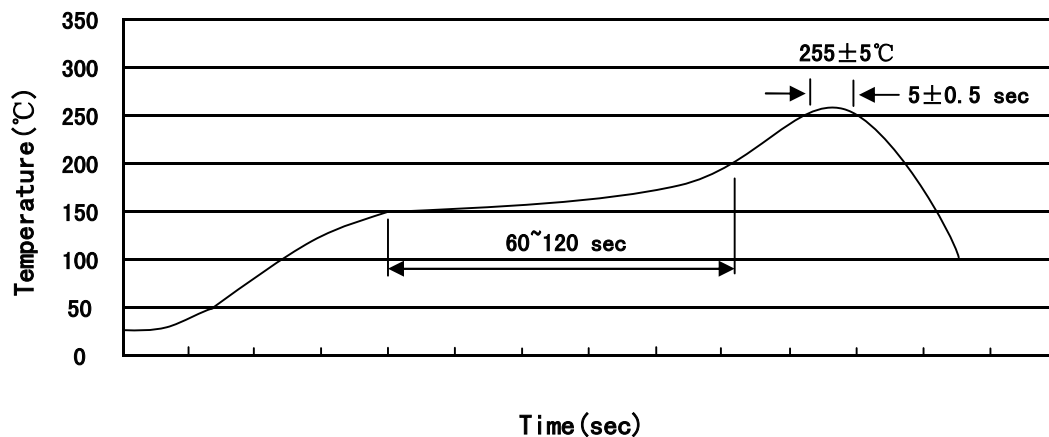
Q: Automobile halogen-free product Code

D1815: Product Type.

R: h_{FE} Classifications Symbol

****: 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°C, Time:60~120sec. |
| 2 | 255±5 | | 5±0.5sec; | | 2.Peak Temp.:255±5°C, Duration:5±0.5sec. |
| 3 | | 2 | 10°C/sec. | | 3. Cooling Speed: 2~10°C/sec. |

/ Resistance to Soldering Heat Test Conditions

260±5°C

10±1 sec.

Temp.:260±5°C

Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	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 只/套管	Tubes/Inner Box 套管/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	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