## 5 é / Descriptions

9 5 : .> / / x RK Ô Â 8 â ’ož Schottky barrier diodes in a SOT-23 Plastic Package.

## ¤ ª / Features

3 g • o v 4 k z 8 â ’ k 4 º Ì ” / x k … ` ' + ) 7 ö Õ ä U ´ Å } L k —)í D }ož

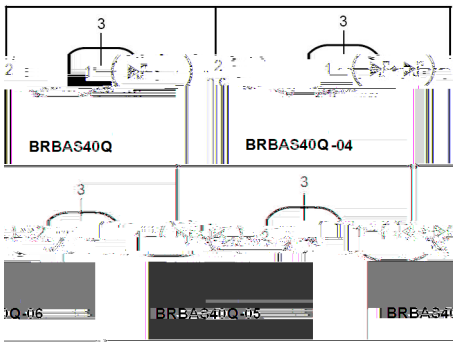
Low forward current, Low diode capacitance, small plastic SMD package, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

## Ð ÷ / Applications

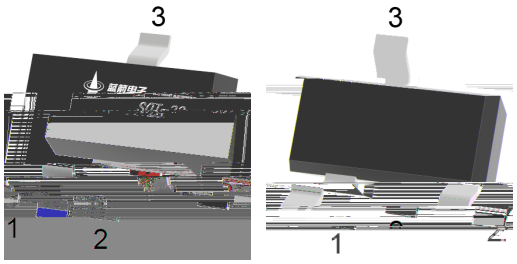
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Ultra high-speed switching, voltage clamping, protection circuits, Meet the stringent requirements of automotive applications.

## Ã W ] Ô · / Equivalent Circuit




## • Û - æ / Pinning




PIN: See Equivalent Circuit.

## , M V / Marking

| Type | BRBAS40Q | BRBAS40Q-04 | BRBAS40Q-05 | BRBAS40Q-06 |
|---|---|---|---|---|
| Marking | Q43 | Q44 | Q45 | Q46 |

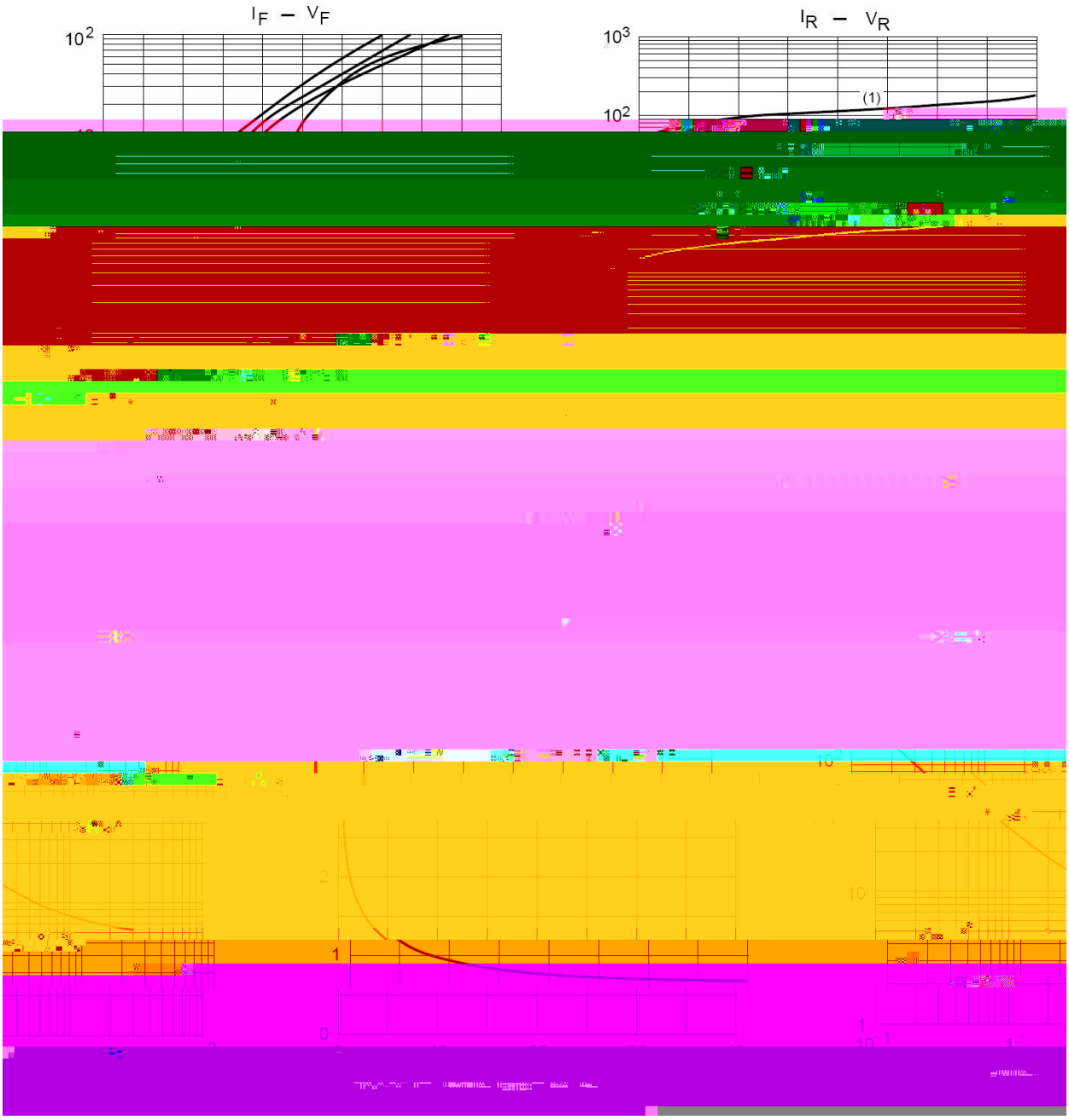
## Ã a ? d / Absolute Maximum Ratings(Ta=25 ; )

| @ ƒ<br>Parameter | … Z<br>Symbol | ƒ ›<br>Rating | % y<br>Unit |
|---|---|---|---|
| Repetitive Reverse Voltage | $V_R$ | 40 | V |
| Average Rectified Forward Current | $I_F$ | 120 | mA |
| Repetitive Peak Forward Surge Current | $I_{FRM}$ Ät$_p$ ‰ 1s Å | 120 | mA |
| Non-repetitive Peak Forward Surge Current | $I_{FSM}$ Ät$_p$<10ms Å | 100 | mA |
| Thermal Resistance From Junction to Ambient | R $_{JA}$ | 500 | K/W |
| Junction Temperature | $T_j$ | 150 | |
| Storage Temperature Range | $T_{stg}$ | -55 150 | |

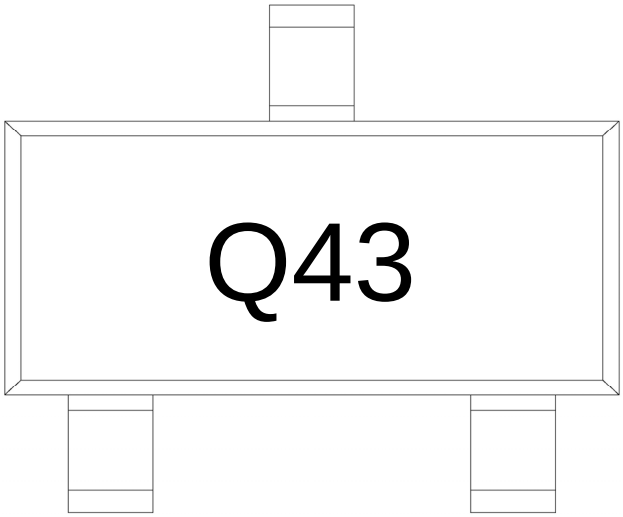
## Ô4ì × ? d / Electrical Characteristics(Ta=25 ; )

| @ ƒ<br>Parameter | … Z<br>Symbol | y ¡ Ú ^<br>Test Conditions | Â 4 ›<br>Min | Á º ›<br>Typ | Â Ý ›<br>Max | % y<br>Unit |
|---|---|---|---|---|---|---|
| Forward Voltage | $V_F$ | $I_F$=1mA | | | 380 | mV |
| | | $I_F$=10mA | | | 500 | mV |
| | | $I_F$=40mA | | | 1.0 | V |
| Instantaneous Reverse Current | $I_R$ | $V_R$=30V | | | 1.0 | A |
| | | $V_R$=40V | | | 10 | A |
| Diode Capacitance | $C_d$ | $V_R$=0 f=1MHz | | | 5 | pF |

## Ô ? d • Ž ¢ / Electrical Characteristic Curve



## , M y ƒ / Marking Instructions




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y º Z W A

Note:

Q: Automobile halogen-free product Code

43: Product Type

## š WD t … • Ž ¢ ( x / ) / : K S V K X G Z [ X K 6 X U L O R K L U X / 8 8 K L R U ] 9 U R J K X O T M 6

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ª ¢ y

1o• Ä ½ “ † 150 ½200 - k ž • 60 ½120sec;

2o• Q › “ † 255 r5 - k ž • 4 Ò 5 r0.5sec;

3o•D N ò i Ò 0 , † 2 ½10 - /sec.

Note:

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

2.Peak Temp.:255 r5 - , Duration:5 r0.5sec.

3.Cooling Speed: 2~10 - /sec.

## ÂD /Cã p ¯ » ] / Resistance to Soldering Heat Test Conditions

“ † y 260 r5 - ž • y 10 r1 sec. Temp.:260±5 Time:10±1 sec

## G P á / Packaging SPEC.

2 & x / REEL

| Package Type 7>û ˜ E | Units ;>û ¦H | | | | | Dimension ;>û p . (unit Æmm³) | | |
|---|---|---|---|---|---|---|---|---|
| | Units/Reel / -- | Reels/Inner Box -- /- | Units/Inner Box /- | Inner Boxes/Outer Box - /1ç | Units/Outer Box /1ç | Reel | Inner Box× | Outer Box1ç |
| SOT-23 | 3,000 | 10 | 30,000 | 6 | 180,000 | s7×8 | 180×120×180 | 390×385×205 |