

1.Features

#### Case: JCT **Glass Passivated Die Construction** Lo w for ward voltage drop High current capability High reliability Metal silicon junction, majority carrier conduction Plastic Case Material has UL Flammability Classication Rating 94V-0 2.Mechanical Data Case: Molded plastic JCT Terminals: Plated leads solderable per MIL-STD-750, Method 2026 guaranteed Polarit y: as marked on case Mounting Position: Any $\sim$ $\sim$ $\sim$

## **3.Maximum Ratings and Electrical Characteristics**

Rating at 25  $^{\circ}$ C ambient temperature unless otherwise specified Single phase,half wave,60Hz,resistive or inductive load For capacitive load derate current by 20%

| PARAMETER  | SYMBOL           | JCT3516            | UNIT             |  |
|--|------------------|--------------------|------------------|--|
| Maximum Recurrent Peak Reverse Voltage   | Vrrm             | 1600               | V                |  |
| Maximum RMS Voltage  | VRMS             | 1120               | V                |  |
| Maximum DC Blocking Voltage  | VDC              | 1600               | V                |  |
| Average Rectified Output Current @Tc=90°C  | IF(AV)           | 35                 | А                |  |
| Peak Forward Surge Current 8.3ms @Tj=25°C  |                  | 450                |                  |  |
| Single half sine-wave superimposed @Tj=125°C   | IFSM             | 360                | А                |  |
| on rated load (JEDEC Method)   |                  |                    |                  |  |
| I <sup>2</sup> t Rating for Fusing (t < 8.3ms)   | l <sup>2</sup> t | 840                | A <sup>2</sup> s |  |
| Maximum Instantaneous Forward Voltage @IF=17.5A  | Vfm              | 1.1                | V                |  |
| Maximum DC reverse current @Tj=25°C  |                  | 5.0                |                  |  |
| at rated DC blocking voltage @Tj=125°C   | IR               | 500                | uA               |  |
| Dielectric Strength  | Vids             | 2500               | V                |  |
| The proposed installation torque<br>Max torque   | Tor              | Тур. 5.0<br>Мах 20 | Kgf.cm           |  |
| Typical Junction Capacitance (Note 1)  | Cj               | 140                | pF               |  |
| Junction to ambient thermal resistance,without heatsink<br>Junction to case thermal resistance,with heatsink |                  | 18                 | °C 844           |  |
|  |                  | 1.5                | 0,00             |  |
| Operating Temperature Range  | Tj               | -55 to+150         | °C               |  |
| Storage Temperature Range  | Тѕтс             | -55 to+150         | °C               |  |

#### Note:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.



#### 4. Rating And Characteristic Curves











#### 5. Dimensions





| Dimensions | Inches |       | Millimeters |      | Dimensions | Inches |       | Millimeters |      |
|------------|--------|-------|-------------|------|------------|--------|-------|-------------|------|
|            | Min    | Max   | Min         | Max  | Dimensions | Min    | Max   | Min         | Max  |
| А          | 1.787  | 1.811 | 45.4        | 46.0 | J          | 0.193  | 0.201 | 4.9         | 5.1  |
| В          | 1.209  | 1.248 | 30.7        | 31.7 | К          | 0.303  | 0.327 | 7.7         | 8.3  |
| С          | 0.768  | 0.807 | 19.5        | 20.5 | L          | 0.205  | 0.228 | 5.2         | 5.8  |
| D          | 0.150  | 0.165 | 3.8         | 4.2  | М          | 1.043  | 1.083 | 26.5        | 27.5 |
| E          | 0.406  | 0.429 | 10.3        | 10.9 | Ν          | 0.165  | 0.189 | 4.2         | 4.8  |
| F          | 0.287  | 0.311 | 7.3         | 7.9  | 0          | 0.039  | 0.320 | 0.6         | 1.0  |
| G          | 0.039  | 0.047 | 1.0         | 1.2  | Р          | 0.480  | 0.504 | 12.2        | 12.8 |
| Н          | 0.006  | 0.014 | 2.3         | 2.7  | Ø1         | 0.173  | 0.181 | 4.4         | 4.6  |
| I          | 0.173  | 0.181 | 4.4         | 4.6  |            |        |       |             |      |

#### 6. Part Marking System



### 7. Package Information

| Package | Per tube       | Per box        | Delivery |
|---------|----------------|----------------|----------|
|         | Quantity (pcs) | Quantity (pcs) | Mode     |
| JCT     | 10             | 200            | Tube     |



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