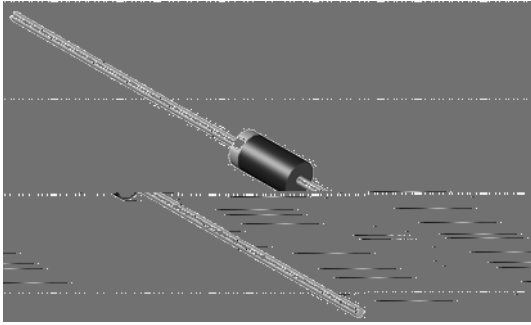


## Super Fast Recovery Rectifier

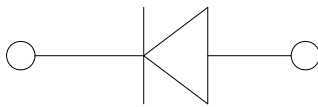


### Features

- Ultrafast reverse recovery time
- Low leakage current
- Low switching losses, high efficiency
- High forward surge capability
- Glass passivated chip junction
- Solder dip 275 °C max. 7 s, per JESD 22-B106

### Typical Applications

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer and telecommunication.



### Mechanical Data

**Package:** DO-204AC(DO-15)

Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant

**Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

**Polarity:** Color band denotes the cathode end

### Maximum Ratings (T<sub>a</sub>=25 Unless otherwise specified)

| PARAMETER  | SYMBOL             | UNIT             | SF1600     |
|--|--------------------|------------------|------------|
| Device marking code  |                    |                  | SF1600     |
| Maximum Repetitive Peak Reverse Voltage  | V <sub>RRM</sub>   | V                | 1600       |
| Maximum RMS Voltage  | V <sub>RMS</sub>   | V                | 1120       |
| Maximum DC blocking Voltage  | V <sub>DC</sub>    | V                | 1600       |
| Average Forward Current @60Hz sine wave, Resistance load, T <sub>a</sub> =25             | I <sub>F(AV)</sub> | A                | 1.0        |
| Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T <sub>j</sub> =25 | I <sub>FSM</sub>   | A                | 30         |
| Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T <sub>j</sub> =25    |                    |                  | 60         |
| Current squared time @1ms t8.3 ms T <sub>j</sub> =25 Rating of per diode                 | I <sup>2</sup> t   | A <sup>2</sup> s | 3.735      |
| Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C  | C <sub>j</sub>     | pF               | 14         |
| Storage Temperature  | T <sub>stg</sub>   |                  | -55 ~ +150 |
| Junction Temperature   | T <sub>j</sub>     |                  | -55 ~ +150 |

### Electrical Characteristics T<sub>a</sub>=25 Unless otherwise specified

| PARAMETER   | SYMBOL          | UNIT | TEST CONDITIONS   | SF1600 |
|---|-----------------|------|---|--------|
| Maximum instantaneous forward voltage drop per diode              | V <sub>F</sub>  | V    | I <sub>F</sub> M=1.0A   | 3.4    |
| Maximum DC reverse current at rated DC blocking voltage per diode | I <sub>R</sub>  | μA   | T <sub>j</sub> =25  | 2.5    |
|   |                 |      | T <sub>j</sub> =125   | 100    |
| Maximum reverse recovery time                                     | t <sub>rr</sub> | ns   | I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>r</sub> =0.25A | 75     |

v7KHUPDO & KDUDFWHULSWLWDOV RWKHUĀLVH VSHFLILHG

|                 |            |      |    |
|-----------------|------------|------|----|
| 3\$5\$0(7(5     | 6<0%2/     | 81,7 | 6) |
| 7\SLFDO 7KHUPDO | 5HVLVWDQFH |      |    |

v2UGHULQJ , QIRUDB&ORQ

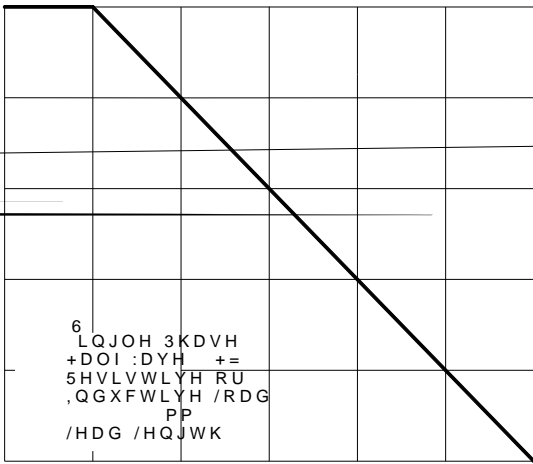
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|---------------|-----------------|-----------------|--------------|--------------|--------------|----------------|
| 35() (5(' 3 1 | 3\$&.\$*( &2'() | 81,7 : ( , * +7 | 0,1,080      | ,11(5 %2;    | 287(5 &\$572 | '(/,9(5< 02'() |
| 6)            |                 | \$SSUR[LPDWH    | 3\$&.\$*( SF | 48\$17,7< SF | 48\$17,7< S  |                |
| \$ 6)         | &               | \$SSUR[LPDWH    |              |              |              |                |

7DSH  
%XON

& KDUDFWHULSWLWDOV

\$YHUDJH )RUZDUG 2XWSXW & XUUKQW

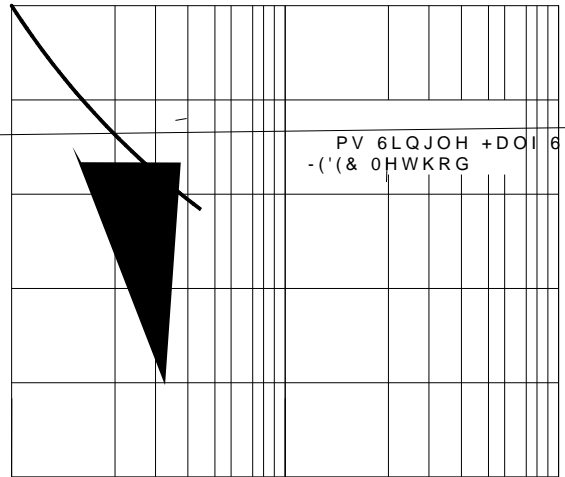
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\$PELHQW 7HPSHUDWXUH

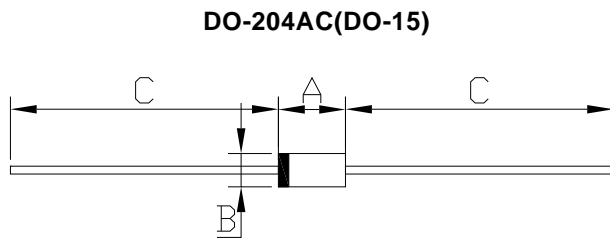
\$3HDN )RUZDUG 6XUJH & XUUKQW

),\* )RUZDUG 6XUJH & XUUKQW & DSDELOLV



1XPEHU RI &\FOHV

**Outline Dimensions**



| <b>DO-204AC(DO-15)</b> |      |      |
|------------------------|------|------|
| Dim                    | Min  | Max  |
| A                      | 5.80 | 7.60 |
| B                      | 2.60 | 3.60 |
| C                      | 25.4 | /    |
| D                      | 0.70 | 0.90 |



## SF1600

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### Disclaimer

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