



1N5802US/1N5804US/1N5806US

Superfast Recovery Diodes

Surface Mount (US)

POWER DISCRETES

Description

Quick reference data

V_R 50 -150 V

I_F 1N5802US to 1N5806US = 2.5A

t_{rr} 1N5802US to 1N5806US = 25nS

I_R 1N5802US to 1N5806US = 1 μ A

Features

- ◆ Very low reverse recovery time
- ◆ Hermetically sealed non-cavity construction
- ◆ Soft, non-snap, off recovery characteristics
- ◆ Very low forward voltage drop

These products are qualified to MIL-PRF-19500/477 and are preferred parts as listed in MIL-HDBK-5961. They can be supplied fully released as JANTX, JANTXV and JANS versions.

Electrical Specifications

Electrical specifications @ $T_A = 25^\circ\text{C}$ unless otherwise specified.

| | Symbol | 1N5802US | 1N5804US | 1N5806US | Units |
|---|----------------------------|-------------|----------|----------|----------------------|
| Working Reverse Voltage | V_{RWM} | 50 | 100 | 150 | V |
| Repetitive Reverse Voltage | V_{RRM} | 50 | 100 | 150 | V |
| Average Forward Current (@ 75°C lead length = 0.375') | $I_{F(AV)}$ | 2.5 | | | A |
| Repetitive Surge Current (@ 55°C lead length = 0.375') | I_{FRM} | 14 | | | A |
| Non-Repetitive Surge Current ($t_p = 8.3\text{ms}$ @ V_r & T_{JMAX}) | I_{FSM} | 35 | | | A |
| Storage Temperature Range | T_{STG} | -65 to +175 | | | $^\circ\text{C}$ |
| Average Forward Current Max (pcb mounted: $T_A = 55^\circ\text{C}$) Sine wave Square wave (d = 0.5) | $I_{F(AV)}$ $I_{F(AV)}$ | 1.0 1.1 | | | A |
| I^2t for fusing (t = 8.3ms) max | I^2t | 10 | | | A^2S |
| Forward Voltage Drop max @ $T_J = 25^\circ\text{C}$ | V_F | 0.875 @ 1A | | | V |
| Reverse Current max @ V_{WRM} , $T_J = 25^\circ\text{C}$ @ V_{WRM} , $T_J = 100^\circ\text{C}$ | I_R I_R | 1.0 50 | | | μA |
| Reverse Recovery Time max (1.0A I_F to 1.0A I_{RM} recover to 0.25A $I_{RM(REC)}$) | trr | 25 | | | nS |
| Junction Capacitance typ @ $V_R = 5\text{V}$ f = 1MHz | C_J | 25 | | | pF |
| Thermal Resistance to end cap | $R_{\theta JEC}$ | 13 | | | $^\circ\text{C/W}$ |

POWER DISCRETES

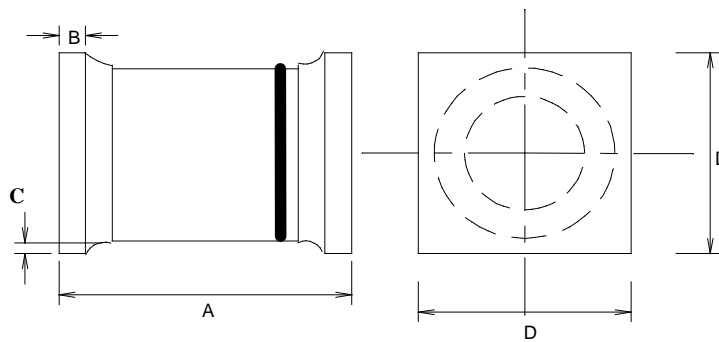
Ordering Information

| Part Number | Description |
|------------------------------------|------------------------------|
| 1N5802US, 1N5804US, 1N5806US | Surface Mount ⁽¹⁾ |

Note:

(1) Available in trays and tape and reel packaging. Please consult factory for quantities.

Outline Drawing



*Cathode is denoted by a black band on a white body.

| | Dimensions in Inches | |
|---|----------------------|-------|
| | 1N5802US - 1N5806US | |
| | MIN | MAX |
| A | 0.168 | 0.2 |
| B | 0.019 | 0.028 |
| C | 0.003 | - |
| D | 0.091 | 0.103 |

Contact Information

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