

3N253-3N259

DUAL GATE MOSFET VHF AMPLIFIER

FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

MAXIMUM RATINGS

| Rating | Symbol | 3N253 | 3N254 | 3N255 | 3N256 | 3N257 | 3N258 | 3N259 | Units |
|--|-----------------|-------------|-------|-------|-------|-------|-------|-------|---------------------------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum average forward output rectified current at $T_A = 50^\circ\text{C}$ | $I_{F(AV)}$ | 2.0 | | | | | | | Amps |
| Peak forward surge current single half-sine wave superimposed on rated load $T_J = 150^\circ\text{C}$ | I_{FSM} | 60.0 | | | | | | | Amps |
| Rating for fusing ($t < 8.3\text{ms}$) | I^2t | 15.0 | | | | | | | A^2s |
| Typical thermal resistance per leg ⁽¹⁾ | $R_{\theta JA}$ | 30.0 | | | | | | | $^\circ\text{C}/\text{W}$ |
| | $R_{\theta JL}$ | 11.0 | | | | | | | |
| Operating and storage temperature range | T_J, T_{stg} | -55 to +165 | | | | | | | $^\circ\text{C}$ |

Note 1: Thermal resistance from junction to ambient and from junction to lead mounted on PCB with 0.47 x 0.47" copper pads.

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$)

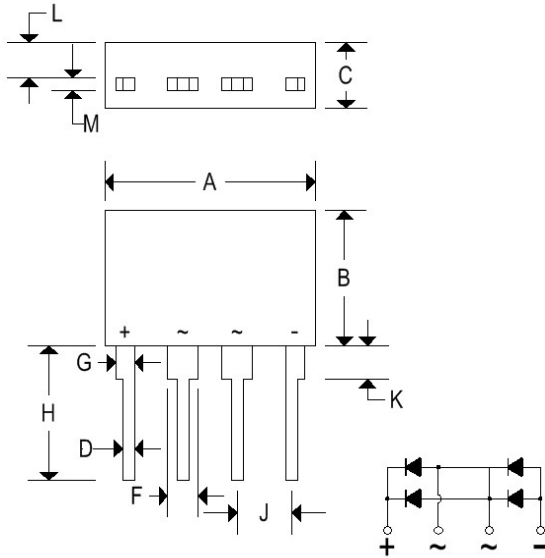
| Characteristic | Symbol | 3N253 | 3N254 | 3N255 | 3N256 | 3N257 | 3N258 | 3N259 | Units |
|--|--------|-------|-------|-------|-------|-------|-------|-------|---------------|
| Maximum instantaneous forward voltage drop per leg at 3.14A | V_F | 1.1 | | | | | | | Volts |
| Maximum DC reverse current at rated DC blocking voltage per leg $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$ | I_R | 5 | | | | | | | μA |
| | | 500 | | | | | | | |
| Typical junction capacitance | C_J | 25 | | | | | | | pF |

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MECHANICAL CHARACTERISTICS

| | |
|-----------------|-----------------------------|
| Case: | Digi M |
| Marking: | Body painted, alpha-numeric |
| Pin out: | See below |



| | Digi M | | | |
|---|--------|-------|-------------|--------|
| | Inches | | Millimeters | |
| | Min | Max | Min | Max |
| A | 0.580 | 0.620 | 14.732 | 15.748 |
| B | 0.360 | 0.400 | 9.144 | 10.160 |
| C | 0.185 | 0.195 | 4.699 | 4.953 |
| D | 0.025 | 0.035 | 0.635 | 0.889 |
| F | 0.080 | 0.090 | 2.032 | 2.286 |
| G | 0.040 | 0.055 | 1.016 | 1.397 |
| H | 0.390 | 0.430 | 9.906 | 10.922 |
| J | 0.145 | 0.160 | 3.683 | 4.064 |
| K | 0.080 | 0.090 | 2.032 | 2.286 |
| L | 0.090 | 0.110 | 2.286 | 2.794 |
| M | 0.025 | 0.035 | 0.635 | 0.889 |

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