

VCR3P

P-Channel Silicon Voltage Controlled Resistor JFET

- Small Signal Attenuators
- Filters
- Amplifier Gain Control
- Oscillator Amplitude Control

Absolute maximum ratings at $T_A = 5^\circ\text{C}$.

| | |
|--|-----------|
| Reverse Gate Source & Reverse Gate Drain Voltage | 15 V |
| Continuous Forward Gate Current | 10 mA |
| Continuous Device Power Dissipation | 300 mW |
| Power Derating | 2.4 mW/°C |

At 25°C free air temperature:

Static Electrical Characteristics

| | | VCR3P | | Process PJ99 | | |
|-------------------------------|---------------|-------|-----|--------------|---|--|
| | | Min | Max | Unit | Test Conditions | |
| Gate Source Breakdown Voltage | $V_{(BR)GSS}$ | 15 | | V | $I_G = 1 \mu\text{A}$, $V_{DS} = 0\text{V}$ | |
| Gate Reverse Current | I_{GSS} | | 20 | nA | $V_{GS} = 15\text{V}$, $V_{DS} = 0\text{V}$ | |
| Gate Source Cutoff Voltage | $V_{GS(OFF)}$ | 1 | 5 | V | $I_D = -1 \mu\text{A}$, $V_{DS} = -10\text{V}$ | |

Dynamic Electrical Characteristics

| | | | | | | |
|----------------------------|--------------|----|-----|----------|---|---------------------|
| Drain Source ON Resistance | $r_{ds(on)}$ | 70 | 200 | Ω | $V_{GS} = 0\text{V}$, $I_D = 0\text{A}$ | $f = 1 \text{ kHz}$ |
| Drain Gate Capacitance | C_{dg} | | 25 | pF | $V_{DG} = 10\text{V}$, $I_S = 0\text{A}$ | $f = 1 \text{ MHz}$ |
| Source Gate Capacitance | C_{sg} | | 15 | pF | $V_{GS} = 10\text{V}$, $I_D = 0\text{A}$ | $f = 1 \text{ MHz}$ |

TO-18 Package

Dimensions in Inches (mm)

Pin Configuration

1 Source, 2 Gate & Case, 3 Drain

