

N-CHANNEL JFETS

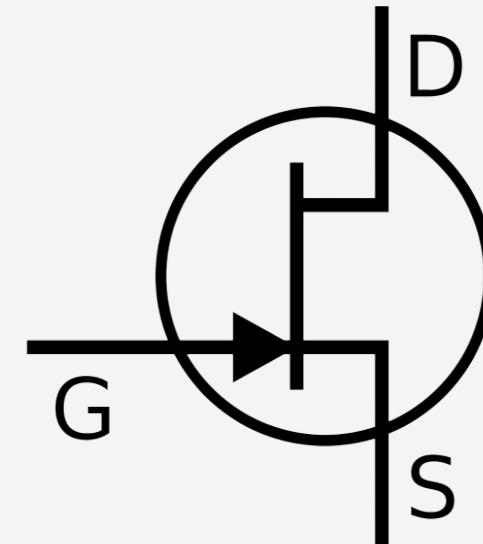


NASCENT SEMICONDUCTOR SILICON CARBIDE N-CHANNEL JUNCTION FETS

High reliability, high temperature, radiation tolerant symmetrical depletion mode silicon carbide n-channel junction FETs in hermetic sealed packaging. Optimised for signal level applications including analog switches, choppers, multiplexers, amplifiers and commutators.

FEATURES

- High speed switching
- Low $R_{DS\ on}$ at zero gate voltage
- Maximum operating temperature 400 °C
- Maximum Total Ionising Dose in excess of 250 krad



RATINGS

25 °C Operation	Minimum	Typical	Maximum	Units
Drain - Source Voltage	50			V
Drain - Saturation Current ($V_{DS} = 15V, V_{GS} = 0V$)		1.7		mA
Gate - Source Cut-Off Voltage ($V_{DS} = 5V, I_{DS} = 1\mu A$)		-3.4		V
Transconductance ($V_{DS} = 0.1V$)		0.03		mA/V
Drain - Source Resistance ($V_{DS} = 0.1V, V_{GS} = 0V$)		1.5		kOhms
Gate Reverse Current ($V_{GS} = -20V$)			50	pA
Gate - Source Breakdown Voltage ($I_{GS} = 1\mu A, V_{DS} = 0V$)	40			V
Channel Modulation		0.0022		V^{-1}

400 °C Operation	Minimum	Typical	Maximum	Units
Drain - Source Voltage	40			V
Drain - Saturation Current ($V_{DS} = 15V, V_{GS} = 0V$)		0.5		mA
Gate - Source Cut-Off Voltage ($V_{DS} = 5V, I_{DS} = 1\mu A$)		-4.3		V
Transconductance ($V_{DS} = 0.1V$)		0.006		mA/V
Drain - Source Resistance ($V_{DS} = 0.1V, V_{GS} = 0V$)		22		kOhms
Gate Reverse Current ($V_{GS} = -20V$)			1	pA
Gate - Source Breakdown Voltage ($I_{GS} = 1\mu A, V_{DS} = 0V$)	40			V
Channel Modulation		0.02		V^{-1}

PART NUMBER LJ50-010
SIGNAL LEVEL JFET



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