

J270 J271

CASE 29-02, STYLE 5
TO-92 (TO-226AA)

JFET
CHOPPER TRANSISTOR

P-CHANNEL — DEPLETION

Refer to MPF970 for graphs.

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	30	Vdc
Drain-Gate Voltage	V_{DG}	30	Vdc
Gate-Source Voltage	V_{GS}	30	Vdc
Gate Current	I_G	50	mA
Total Device Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	360 3.27	mW mW/°C
Storage Temperature Range	T_{stg}	-65 to +150	°C

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted.)

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Gate-Source Breakdown Voltage ($I_G = 1.0 \mu\text{A}$)	$V_{(BR)GSS}$	30	—	Vdc	
Gate Reverse Current ($V_{GS} = 20$ Volts)	I_{GSS}	—	200	μA	
Gate Source Cutoff Voltage ($V_{DS} = -15 \text{ V}$, $I_D = -1.0 \text{ nA}$)	$V_{GS(off)}$	J270 J271	0.5 1.5	2.0 4.5	Vdc

ON CHARACTERISTICS

Zero-Gate-Voltage Drain Current ($V_{DS} = -15 \text{ V}$)	J270 J271	I_{DSS}^*	-2.0 -6.0	-15 -50	mA
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SMALL-SIGNAL CHARACTERISTICS

Forward Transfer Admittance ($V_{DS} = -15 \text{ V}$, $f = 1.0 \text{ kHz}$)	J270 J271	$ y_{fs} $	6000 8000	15000 18000	μmhos
Output Admittance ($V_{DS} = -15 \text{ V}$, $f = 1.0 \text{ kHz}$)	J270 J271	$ y_{os} $	— —	200 500	μmhos
Input Capacitance ($V_{DS} = -15 \text{ V}$, $f = 1.0 \text{ MHz}$)		C_{iss}	—	32	pF
Reverse Transfer Capacitance ($V_{DS} = -15 \text{ V}$, $f = 1.0 \text{ MHz}$)		C_{rss}	—	8.0	pF

*Pulse Width $\leq 2.0 \text{ ms}$.