n-channel JFETs *designed for . . .*

- **VHF Amplifier**
- **Oscillators**
- **Mixers**

Performance Curves NC
See Section 4

BENEFITS

- Wide Band
  High y_{fs}/C_{iss} Ratio
- Low IMD

TO-92
See Section 5

TO-92 Variant
See Section 5

BF246

BF247
(Staggered Lead)

- INSULATED CASE
- INSENSITIVE TO LIGHT

ABSOLUTE MAXIMUM RATINGS (25°C)

Drain-Gate Voltage . . . . . 25 V
Drain-Source Voltage . . . . . 25 V
Reverse Gate-Source Voltage. . . . . 25 V
Forward Gate Current. . . . . 10 mA
Continuous Device Dissipation
at (or Below) 25°C Free Air Temperature
(Note 1) . . . . . 250 mW
Storage Temperature Range . . . . . −55° C to +150°C

ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

	Characteristic			Min	Typ	Max	Unit	Test Conditions
1	BV_{GSS}	Gate-Source Breakdown Voltage		−25			V	$I_G = -1\ \mu A$, $V_{DS} = 0$
2	I_{GSS}	Gate Reverse Current				−5 −5	nA μA	$V_{GS} = -15$ V, $V_{DS} = 0$ $T_A = 100°C$
3	I_{DSS}	Saturation Drain Current (Note 2)	BF246 BF247	10		300	mA	$V_{DS} = 10$ V, $V_{GS} = 0$
			BF246A BD247A	30		80		
			BF246B BF247B	60		140		
			BF246C BF247C	110		250		
4	V_{GS}	Gate-Source Voltage	BF246 BF247	0.5		14	V	$V_{DS} = 15$ V, $I_D = 200\ \mu A$
			BF246A BF247A	1.5		4.0		
			BF246B BF247B	3.0		7.0		
			BF246C BF247C	5.5		12		
5	$V_{GS(off)}$	Gate-Source Cutoff Voltage		0.6		14.5	V	$V_{DS} = 15$ V, $I_D = 10$ nA
6	g_{fs}	Small-Signal Common-Source Forward Transconductance (Note 2)			25		mmho	$V_{DS} = 15$ V, $V_{GS} = 0$, f = 1 kHz
7	C_{iss}	Common-Source Short-Circuit Input Capacitance				12	pF	$V_{DS} = 10$ V, $V_{GS} = -1$ V, f = 1 MHz
8	C_{rss}	Common-Source Short-Circuit Reverse Transfer Capacitance				2.5	pF	$V_{DS} = 10$ V, $V_{GS} = -4$ V, f = 1 MHz

NOTES: NC

1. Derate linearly to 125°C free air temperature at the rate of 2.5 mW/°C.
2. These parameters must be measured using pulse techniques $t_p \leq 300\ \mu s$, duty cycle ≤ 2%.