



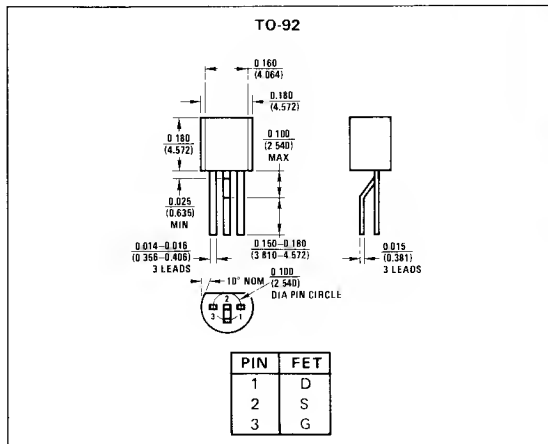
2N5245-47 N-Channel JFETs

General Description

The 2N5245 thru 2N5247 series of N-channel JFETs is designed for common-source or common-gate VHF/UHF amplifier, mixer and oscillator applications to 400 MHz.

Absolute Maximum Ratings

Drain-Gate Voltage	30V
Source Gate Voltage	30V
Drain Current	30 mA
Forward Gate Current	50 mA
Total Device Dissipation @ 25°C (Derate above 25°C)	360 mW 2.88 mW/°C
Operating Junction Temperature Range	-65°C to +150°C
Storage Temperature Range	-65°C to +150°C
Lead Temperature (1/16" from case for 10 seconds)	300°C



Electrical Characteristics (25°C unless otherwise noted)

PARAMETER	CONDITIONS	2N5245		2N5246		2N5247		UNITS	
		MIN	MAX	MIN	MAX	MIN	MAX		
I _{GSS} Gate Reverse Current	V _{GS} = -20V, V _{DS} = 0 TA = 100°C		-1		-1		-1	nA	
			-500		-500		-500		
BV _{GSS} Gate-Source Breakdown Voltage	I _G = -1 μA, V _{DS} = 0	-30		-30		-30		V	
V _{GS(off)} Gate Source Cutoff Voltage	V _{DS} = 15V, I _D = 10 nA	-1	-6	-0.5	-4	-1.5	-8		
I _{DSS} Saturation Drain Current	V _{DS} = 15V, V _{GS} = 0, (Note 1)	5	15	1.5	7	8	24	mA	
g _{fs} Common-Source Forward Transconductance	V _{DS} = 15V, V _{GS} = 0	f = 1 kHz	4.5	7.5	3.0	6.0	4.5	8.0	mmho
g _{os} Common-Source Output Conductance				50		50		70	μmho
Re(y _{fs}) Common Source Forward Transconductance		f = 400 MHz	4.0		2.5		4.0		mmho
Re(y _{os}) Common-Source Output Conductance		f = 100 MHz		75		75		100	μmho
		f = 400 MHz		100		100		150	
Re(y _{is}) Common-Source Input Conductance		f = 100 MHz		100		100		100	μmho
C _{iSS} Common Source Input Capacitance		f = 1 MHz		4.5		4.5		4.5	pF
C _{rSS} Common-Source Reverse Transfer Capacitance			1		1		1		
NF Noise Figure	V _{DS} = 15V, I _D = 5 mA, R _G = 1 kΩ	f = 100 MHz	2		2		2	dB	
	V _{DS} = 15V, I _D = 5 mA, R _G = 1 kΩ	f = 400 MHz		4		4	4		
G _{ps} Common-Source Power Gain	V _{DS} = 15V, I _D = 5 mA, R _G = 1 kΩ	f = 100 MHz	18		18		18	dB	
	V _{DS} = 15V, I _D = 5 mA, R _G = 1 kΩ	f = 400 MHz	10		10		10		

Note 1: Pulse Test PW 300 μs, duty cycle ≤ 3%.