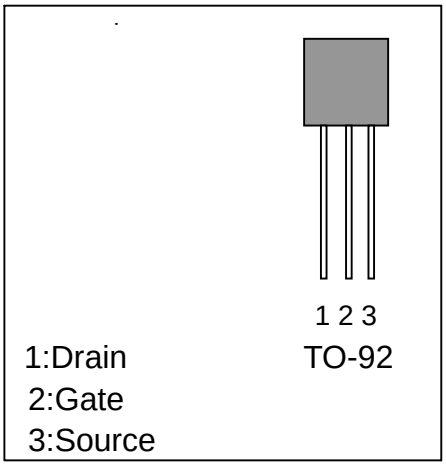
Apm JFET 2SK117

Low Noise Amplifier Applications Silicon N Channel Junction Type

*High Yfs=15ms(typ)(VDS=10V,VGS=0)
*High VGDS=--30V
*Low noise:NF=1.0dB(typ)
(VDS=10V,ID=0.5mA,f=1kHz,RG=1kΩ)
*High input impedance:IGSS=-1nA,VGS=-30V)



Absolute Maximum rating at Ta=25℃

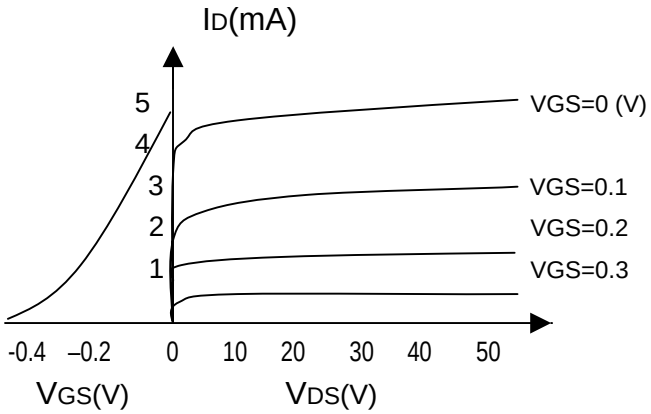
SYMBOL	PARAMETER	MIN.	MAX.	UNIT
VGDS	Gate-Drain voltage	30		V
IG	Gate current	10		mA
Tstg	storage temprature	-55	+150	℃
Tj	operating junction temperature	-55	+125	℃
PD	Drain power dissipation	300		mW

Electrical Characteristics at Ta=25℃

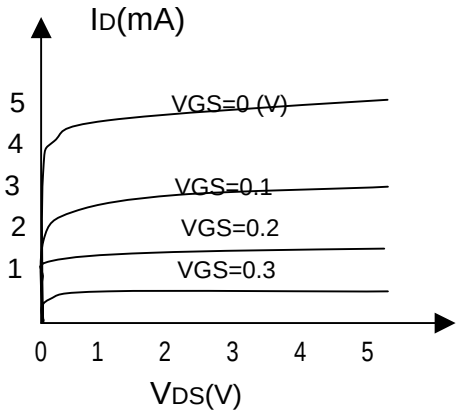
SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
IGSS	Gate cut-off current	VGS=-30V			-1.0	nA
V(BR)GDS	G-D breakdown voltage	VDS=0,IG=-100uA	-30			V
IDSS	Drain current	VDS=10V,VGS=0	1.2		14	mA
VGS(off)	G-S cut-off voltage	VDS=10V,ID=0.1uA	-0.2		-1.5	V
Yfs	Forward transfer admittance	VDS=10V,VGS=0 f=1khz	4.0	15		mS
Ciss	Input capacitance	VDS=10V,VGS=0 f=1Mhz		13		pF
Crss	Reverse transfer capacitance	VGD=-10V,ID=0,f=1Mhz		3		pF
NF(1)	Noise figure	VDS=10v,RG=1KΩ ID=0.5mA,f=10Hz		5	10	dB
NF(2)	Noise figure	VDS=10v,RG=1KΩ ID=0.5mA,f=1KHz		1	2	dB

Note:IDSS classification Y:1.2—3.0mA, GR:2.6—6.5mA, BL:6—14mA

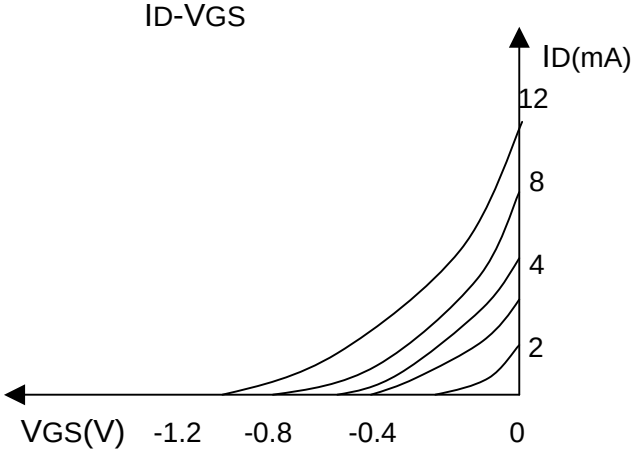
Static characteristics (common source)



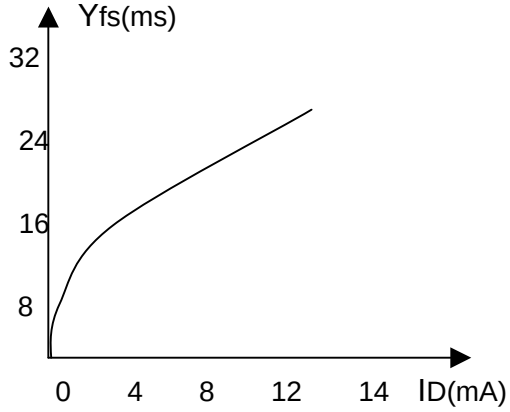
ID—VDS(low voltage region)



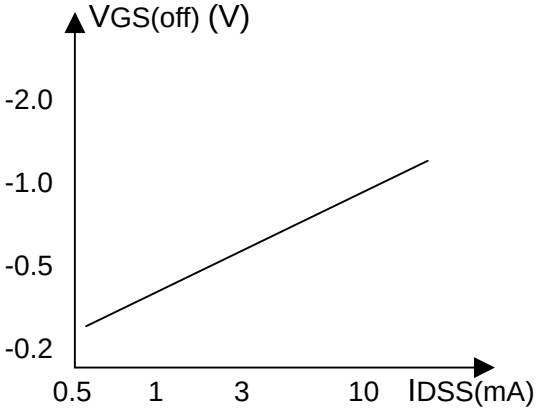
ID-VGS



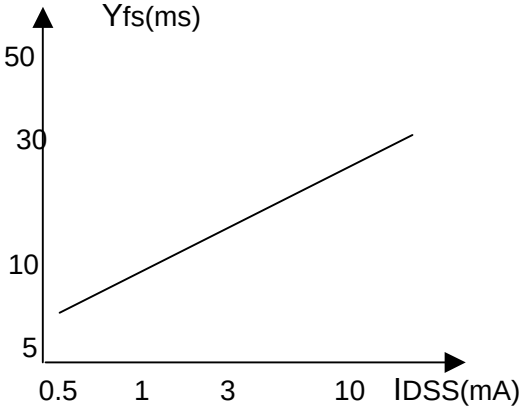
Yfs--ID



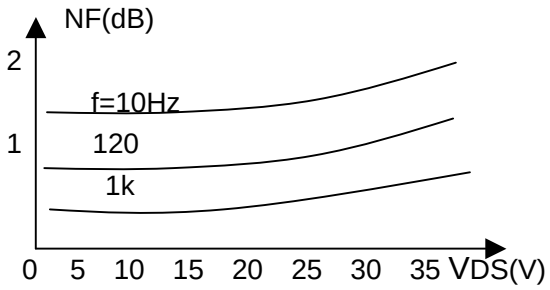
VGS(off)---IDSS



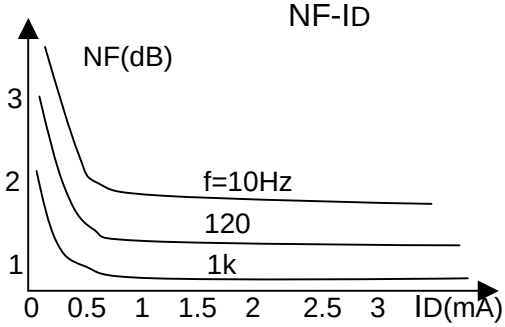
Yfs--IDSS



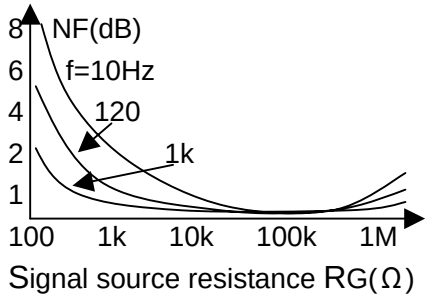
NF-VDS



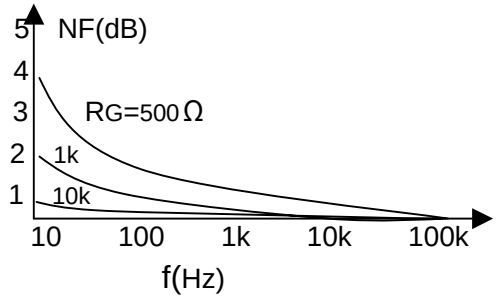
NF-ID



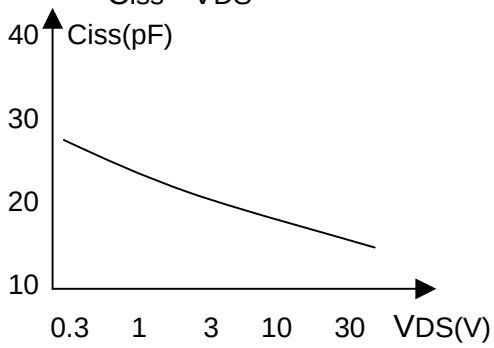
NF-RG



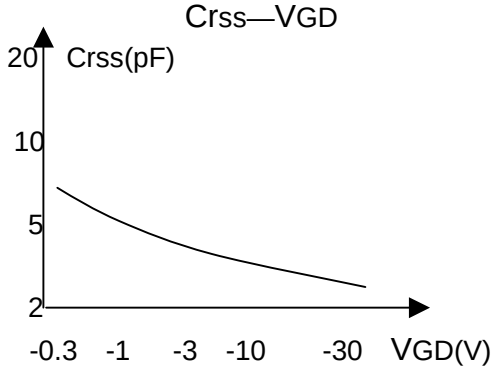
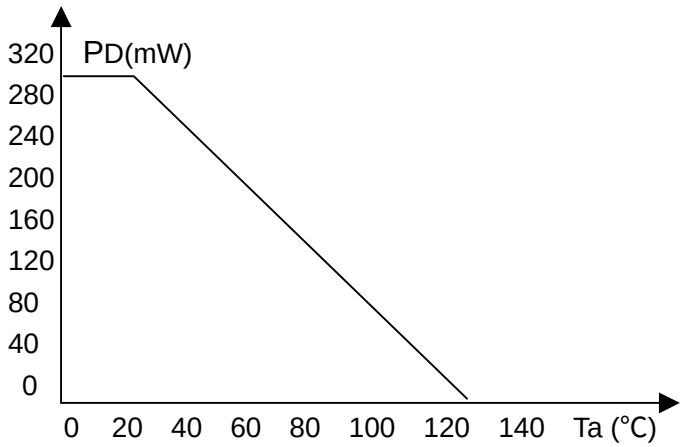
NF-f



Ciss—VDS



Crss—VGD



PD--Ta