Ordering number:EN3154

FC11

N-Channel Junction Silicon FET

Low-Frequency General-Purpose Amp, Differential Amp Applications

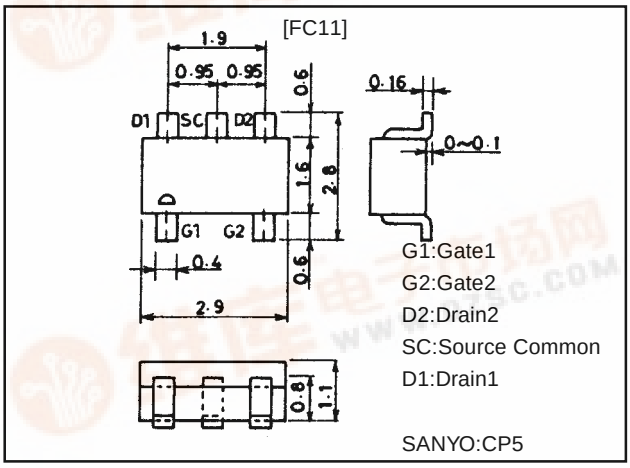
Features

- Adoption of FBET process.
- Composite type with 2 transistors contained in the CP package currently in use, improving the mounting efficiency greatly.
- The FC11 is formed with two chips, being equivalent to the 2SK771, placed in one package.
- Excellent in the thermal equilibrium and pair capability and suitable for use in differential amp.
- Common source.

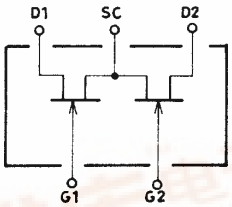
Package Dimensions

unit:mm

2070



Electrical Connection



Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSX}		40	V
Gate-to-Drain Voltage	V_{GDS}		–40	V
Gate Current	I_G		10	mA
Drain Current	I_D		10	mA
Allowable Power Dissipation	P_D	1unit	200	mW
Total Dissipation	P_T		300	mW
Junction Temperature	Tj		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

Electrical Characteristics at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	$V_{(BR)GDS}$	I_G=10μA, V_{DS}=0	–40			V
Gate Cutoff Current	I_{GSS}	V_{GS}=–20V, V_{DS}=0V			–1.0	nA
Cutoff Voltage	$V_{GS(off)}$	V_{DS}=10V, I_D=1μA	–0.3	–0.9	–1.8	V
Gate-to-Source Voltage Drop	ΔV_{GS}	$\lvert V_{GS}$ large – V_{GS} small $\rvert$, V_{DS}=10V, I_D=1mA			30	mV
Drain Current	I_{DSS}	V_{DS}=10V, V_{GS}=0V	1.2*		6.0*	mA
Drain Current Ratio		V_{DS}=10V, I_{DSS} small/I_{DSS} large	0.9			
Forward Transfer Admittance	$\lvert Y_{fs} \rvert$	V_{DS}=10V, V_{GS}=0V, f=1kHz	4.5	9.0		mS
Forward Transfer Admittance Ratio		V_{DS}=10V, $\lvert Y_{fs}\rvert$small / $\lvert Y_{fs}\rvert$large	0.9			
Input Capacitacnce	Ciss	V_{DS}=10V, V_{GS}=0V, f=1MHz		9.0		pF
Reverse Transfer Capacitance	Crss	V_{DS}=10V, V_{GS}=0V, f=1MHz		2.1		pF
Noise Figure	NF	V_{DS}=10V, R_g=1kΩ, I_D=1mA, f=1kHz		1.5		dB

Note*:The FC11 is classified by I_{DSS} as follows (unit:mA)

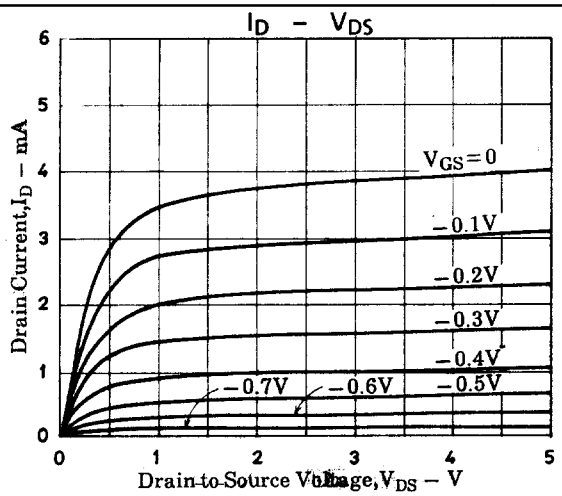
1.2	D	3.0	2.5	E	6.0

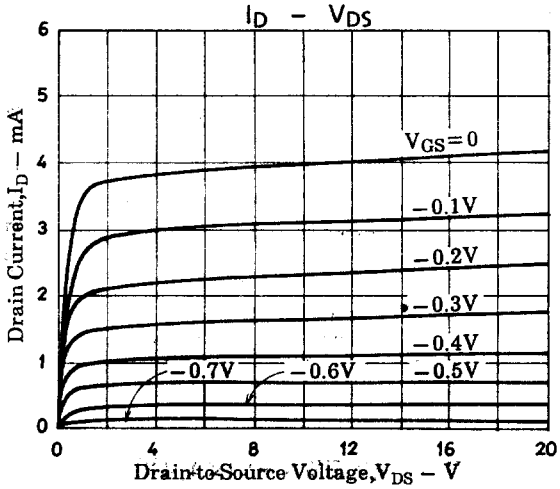
Marking:11

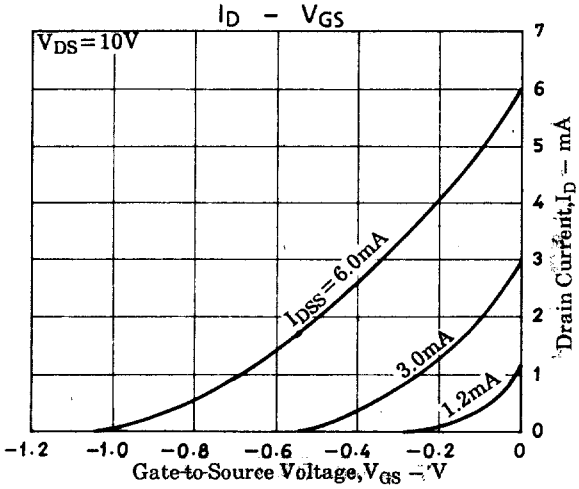
I_{DSS} rank:D,E

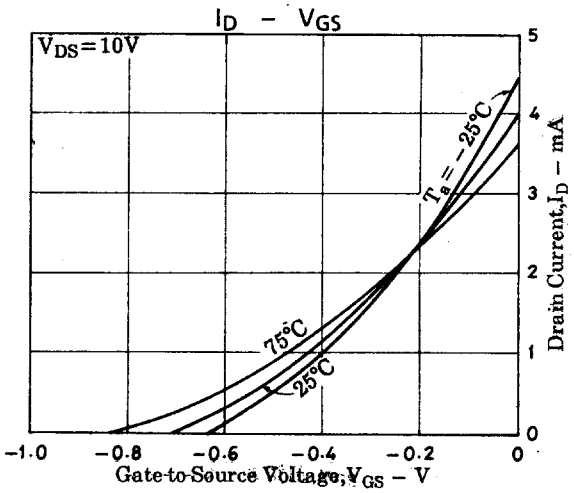
The Specifications shown above are for each individual transistor.

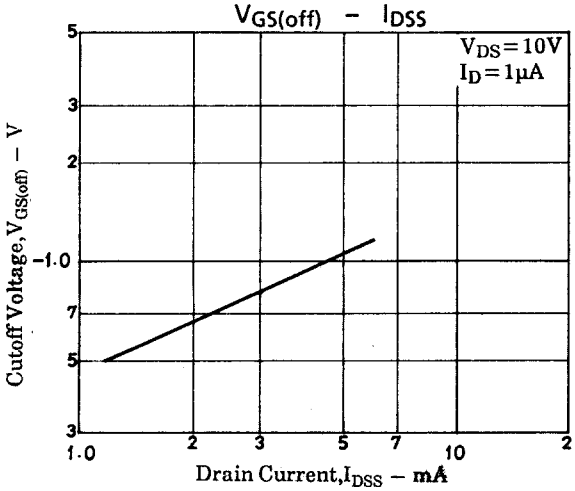
FC11

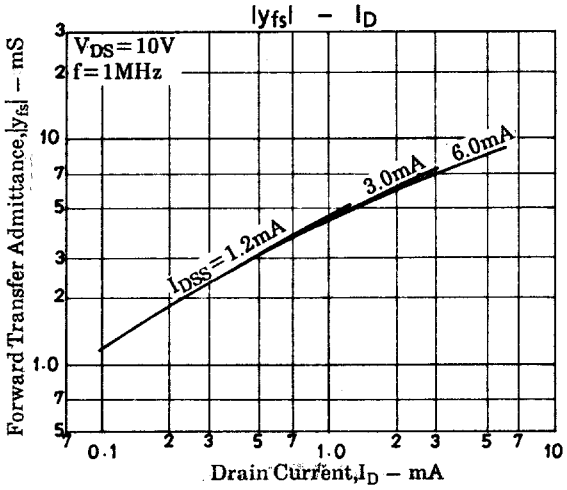

ID – VDS
Drain Current, ID – mA
Drain-to-Source Voltage, VDS – V
VGS=0
–0.1V
–0.2V
–0.3V
–0.4V
–0.5V
–0.6V
–0.7V

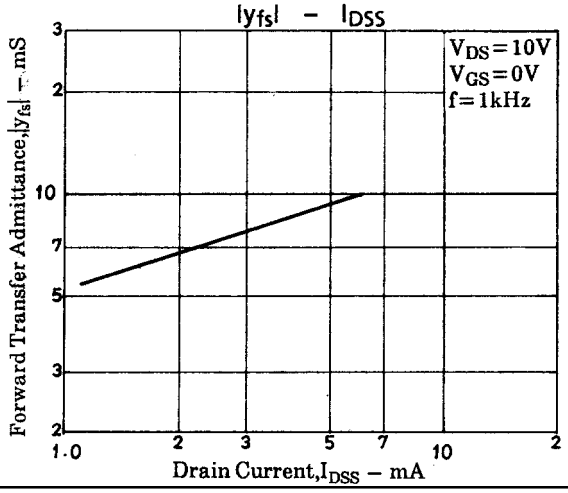

ID – VDS
Drain Current, ID – mA
Drain-to-Source Voltage, VDS – V
VGS=0
–0.1V
–0.2V
–0.3V
–0.4V
–0.5V
–0.6V
–0.7V

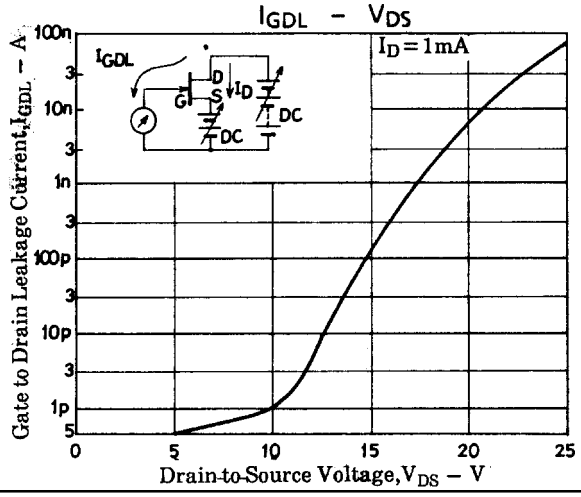

ID – VGS
VDS=10V
IDSS=6.0mA
3.0mA
1.2mA
Drain Current, ID – mA
Gate-to-Source Voltage, VGS – V


ID – VGS
VDS=10V
Ta=–25°C
75°C
25°C
Drain Current, ID – mA
Gate-to-Source Voltage, VGS – V


VGS(off) – IDSS
VDS=10V
ID=1μA
Cutoff Voltage, VGS(off) – V
Drain Current, IDSS – mA


|yfs| – ID
VDS=10V
f=1MHz
IDSS=1.2mA
3.0mA
6.0mA
Forward Transfer Admittance, |yfs| – mS
Drain Current, ID – mA


|yfs| – IDSS
VDS=10V
VGS=0V
f=1kHz
Forward Transfer Admittance, |yfs| – mS
Drain Current, IDSS – mA


IGDL – VDS
ID=1mA
IGDL
G
D
S
ID
DC
DC
Gate to Drain Leakage Current, IGDL – A
Drain-to-Source Voltage, VDS – V