Ordering number:EN3154

FC11

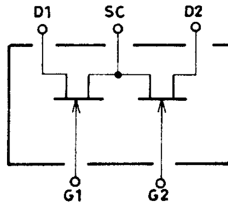
N-Channel Junction Silicon FET

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.

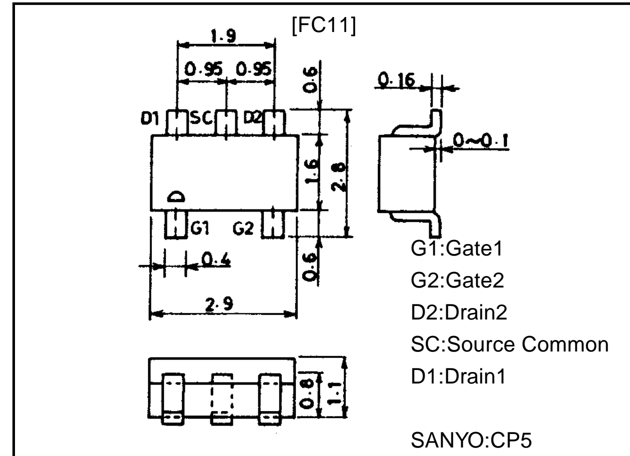
Electrical Connection



Package Dimensions

unit:mm

2070



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}	$\|V_{GS}$ large – V_{GS} small $\|$, 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	$\| Y_{fs} \|$	V_{DS}=10V, V_{GS}=0V, f=1kHz	4.5	9.0		mS
Forward Transfer Admittance Ratio		V_{DS}=10V, $\|Y_{fs}\|$small / $\|Y_{fs}\|$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

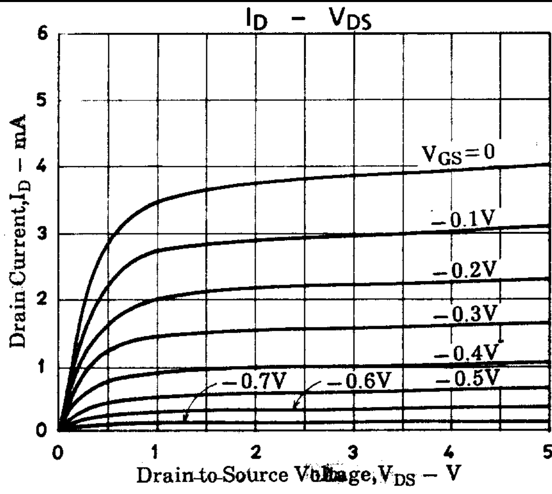
Note*:The FC11 is classified by I_{DSS} as follows (unit:mA)

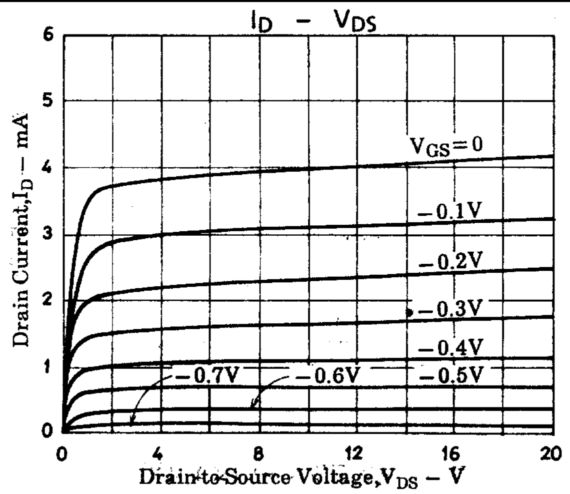
1.2 D 3.0	2.5 E 6.0

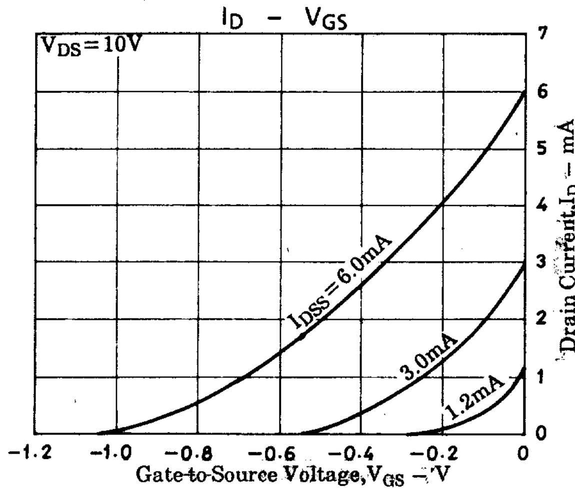
Marking:11

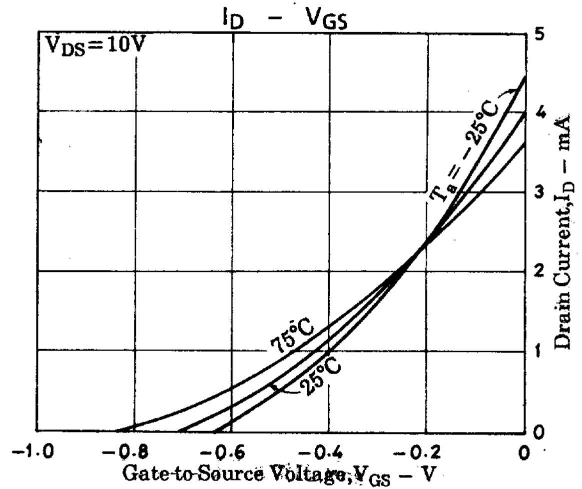
I_{DSS} rank:D,E

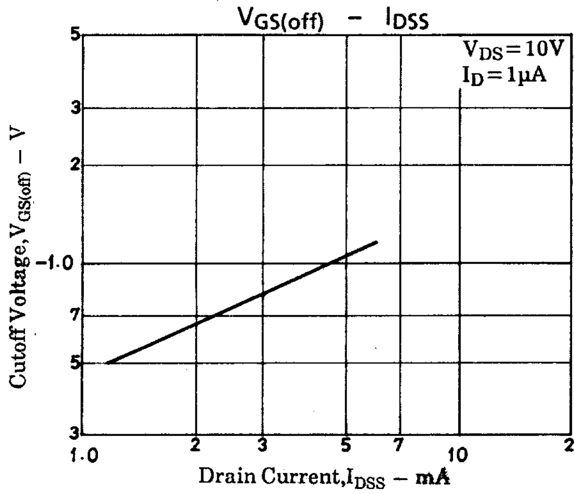
The Specifications shown above are for each individual transistor.

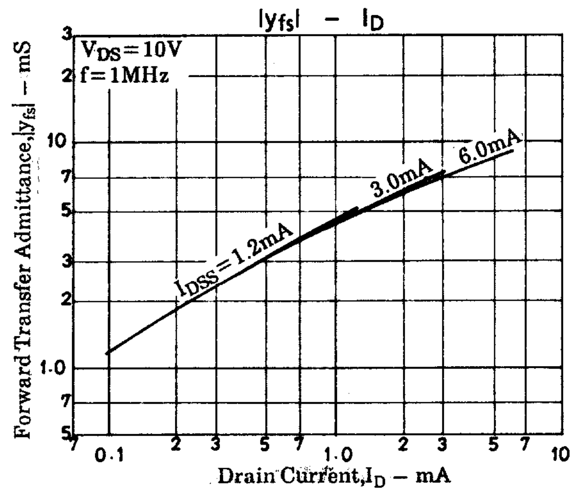

I_D – V_{DS}
Drain Current, I_D – mA
Drain-to-Source Voltage, V_{DS} – V
$V_{GS}=0$
–0.1V
–0.2V
–0.3V
–0.4V
–0.5V
–0.6V
–0.7V

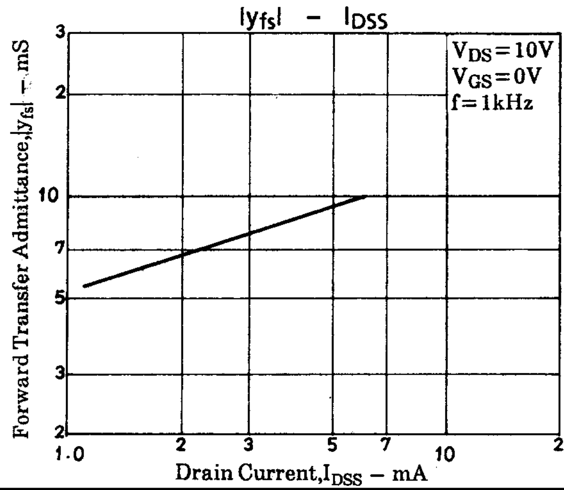

I_D – V_{DS}
Drain Current, I_D – mA
Drain-to-Source Voltage, V_{DS} – V
$V_{GS}=0$
–0.1V
–0.2V
–0.3V
–0.4V
–0.5V
–0.6V
–0.7V

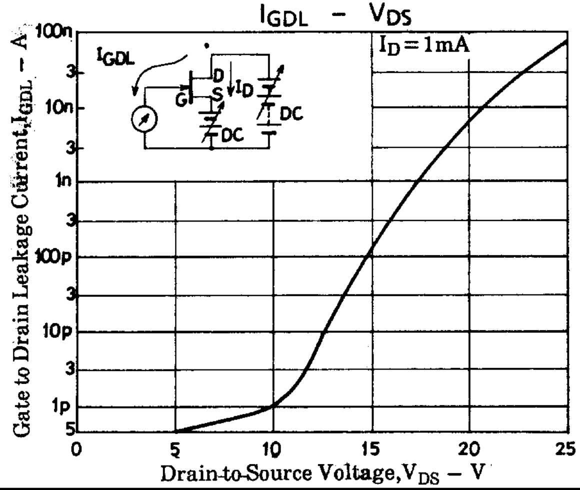

I_D – V_{GS}
$V_{DS}=10V$
$I_{DSS}=6.0mA$
3.0mA
1.2mA
Drain Current, I_D – mA
Gate-to-Source Voltage, V_{GS} – V

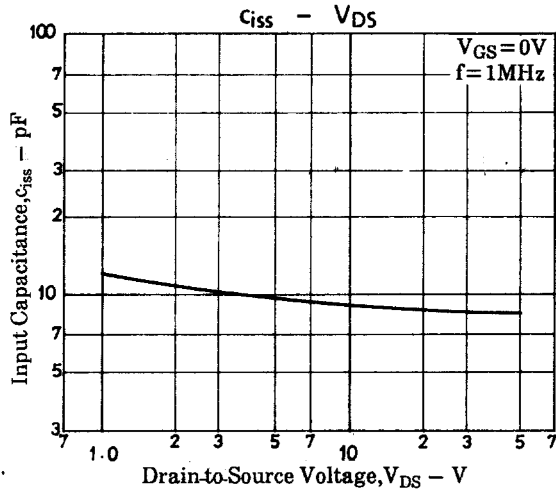

I_D – V_{GS}
$V_{DS}=10V$
$T_a=-25°C$
75°C
25°C
Drain Current, I_D – mA
Gate-to-Source Voltage, V_{GS} – V

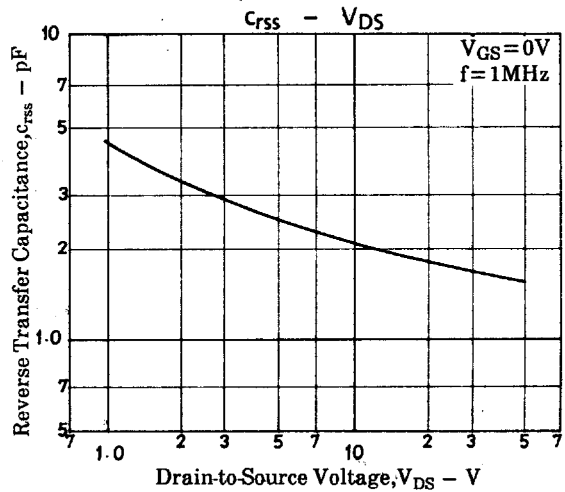

$V_{GS(off)}$ – I_{DSS}
$V_{DS}=10V$
$I_D=1\mu A$
Cutoff Voltage, $V_{GS(off)}$ – V
Drain Current, I_{DSS} – mA

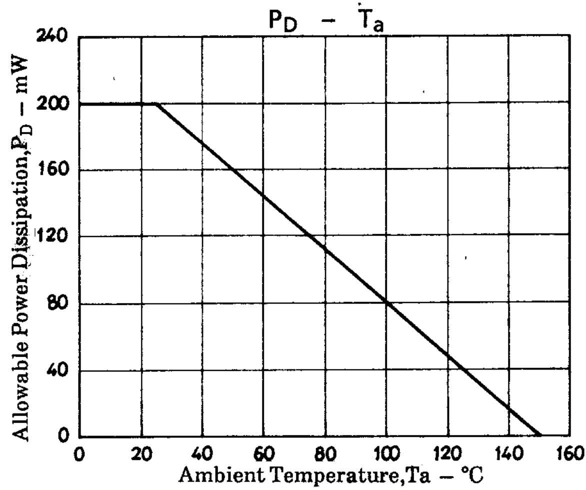

$|y_{fs}|$ – I_D
$V_{DS}=10V$
f=1MHz
$I_{DSS}=1.2mA$
3.0mA
6.0mA
Forward Transfer Admittance, $|y_{fs}|$ – mS
Drain Current, I_D – mA


$|y_{fs}|$ – I_{DSS}
$V_{DS}=10V$
$V_{GS}=0V$
f=1kHz
Forward Transfer Admittance, $|y_{fs}|$ – mS
Drain Current, I_{DSS} – mA


I_{GDL} – V_{DS}
$I_D=1mA$
I_{GDL}
D
G
S
I_D
DC
DC
Gate to Drain Leakage Current, I_{GDL} – A
Drain-to-Source Voltage, V_{DS} – V







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