

Description

- High speed switching application.
- Analog switch application.

Features

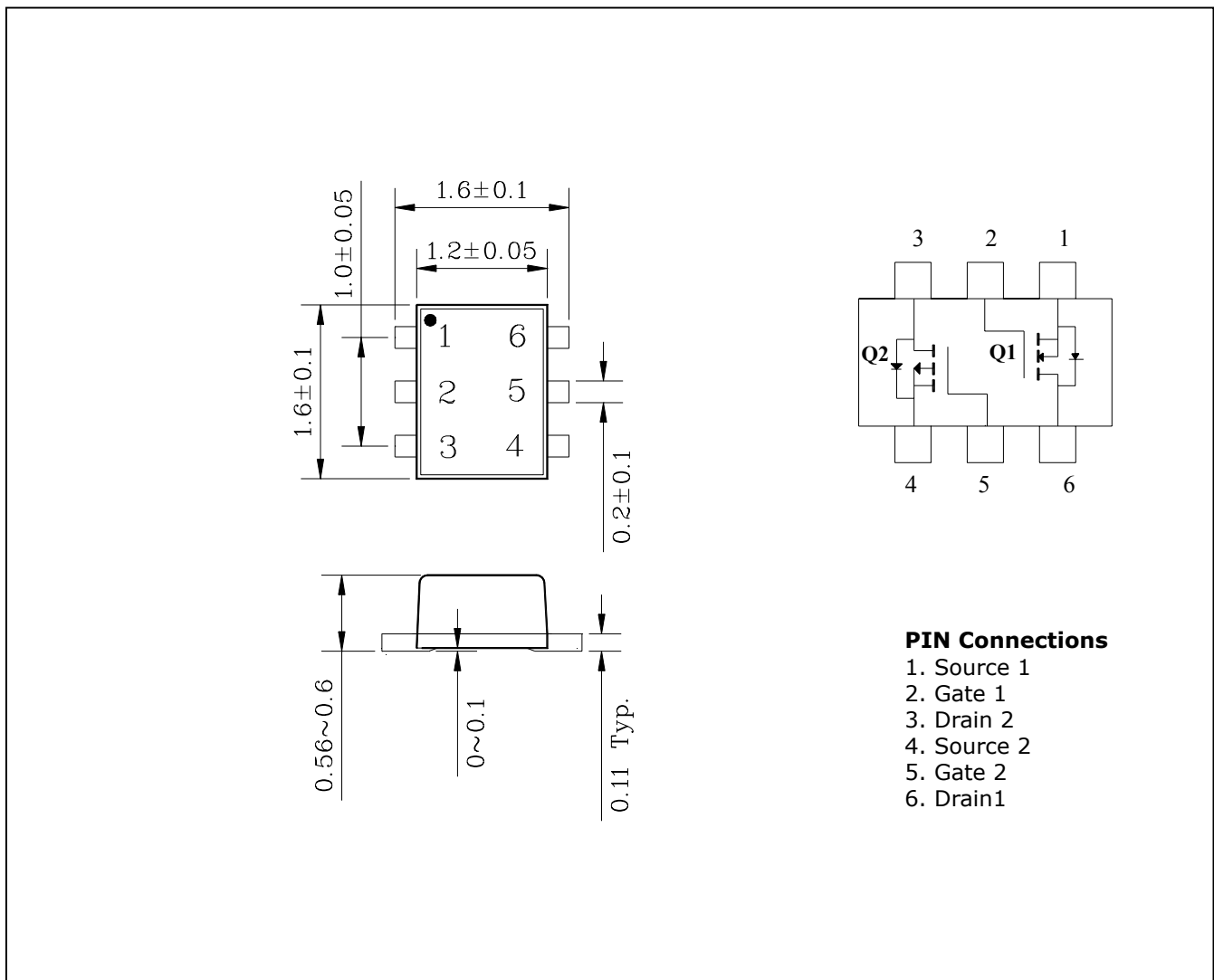
- STK1828 Chip and STJ828 Chip in SOT-563F Package
- Low threshold voltage
- High speed.

Ordering Information

Type NO.	Marking	Package Code
SUF622EF	HX	SOT-563F

Outline Dimensions

unit : mm



Absolute maximum ratings

(Ta=25°C)

Characteristic	Symbol	Ratings		Unit
Drain-Source voltage	V_{DS}	20	-20	V
Gate-Source voltage	V_{GSS}	10	-7	V
DC Drain current	I_D	50	-50	mA
Drain Power dissipation	P_D	100		mW
Channel temperature	T_{ch}	150		°C
Storage temperature range	T_{stg}	-55~150		°C

Electrical Characteristics (Q1:N-CH)

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Drain-Source breakdown voltage	BV_{DSS}	$I_D=100\mu A, V_{GS}=0$	20			V
Gate-Threshold voltage	V_{th}	$I_D=0.1mA, V_{DS}=3V$	0.5		1.5	V
Drain cut-off current	I_{DSS}	$V_{DS}=20V, V_{GS}=0$			1	μA
Gate leakage current	I_{GSS}	$V_{GS}=10V, V_{DS}=0$			1	μA
Drain-Source on-resistance	$R_{DS(ON)}$	$V_{GS}=2.5V, I_D=10mA$		20	40	Ω
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=3V, I_D=10mA$	20			mS
Input capacitance	C_{iss}	$V_{DS}=3V, V_{GS}=0, f=1MHz$		5.5		pF
Output capacitance	C_{oss}	$V_{DS}=3V, V_{GS}=0, f=1MHz$		6.5		pF
Reverse Transfer capacitance	C_{rss}	$V_{DS}=3V, V_{GS}=0, f=1MHz$		1.6		pF
Turn-on time	t_{on}	$V_{DD}=3V, I_D=10mA$ $V_{GEN}=0\sim 2.5V$		0.14		μs
Turn-off time	t_{off}	$V_{DD}=3V, I_D=10mA$ $V_{GEN}=0\sim 2.5V$		0.14		μs

Electrical Characteristics (Q2:P-CH)

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Drain-Source breakdown voltage	BV_{DSS}	$I_D=-100\mu A, V_{GS}=0$	-20			V
Gate-Threshold voltage	V_{th}	$I_D=-0.1mA, V_{DS}=-3V$	-0.5		-1.5	V
Drain cut-off current	I_{DSS}	$V_{DS}=-20V, V_{GS}=0$			-1	μA
Gate leakage current	I_{GSS}	$V_{GS}=-7V, V_{DS}=0$			-1	μA
Drain-Source on-resistance	$R_{DS(ON)}$	$V_{GS}=-2.5V, I_D=-10mA$		20	40	Ω
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=-3V, I_D=-10mA$	15			mS
Input capacitance	C_{iss}	$V_{DS}=-3V, V_{GS}=0, f=1MHz$		10.4		pF
Output capacitance	C_{oss}	$V_{DS}=-3V, V_{GS}=0, f=1MHz$		8.4		pF
Reverse Transfer capacitance	C_{rss}	$V_{DS}=-3V, V_{GS}=0, f=1MHz$		2.8		pF
Turn-on time	t_{on}	$V_{DD}=-3V, I_D=-10mA$ $V_{GEN}=0\sim -2.5V$		0.15		μs
Turn-off time	t_{off}	$V_{DD}=-3V, I_D=-10mA$ $V_{GEN}=0\sim -2.5V$		0.13		μs

Electrical Characteristic Curves (Q1:N-CH)

Fig.1 $I_D - V_{DS}$

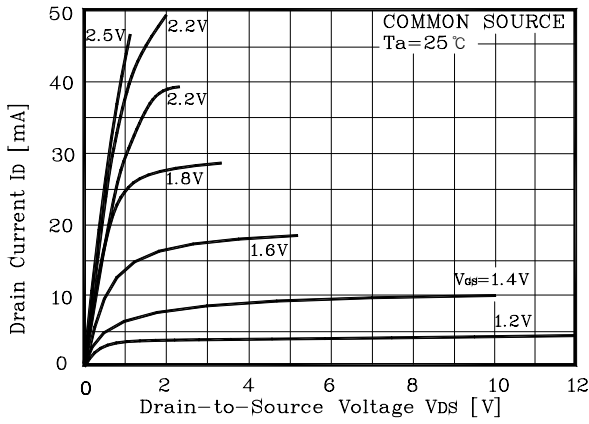


Fig.2 $I_D - V_{DS}$

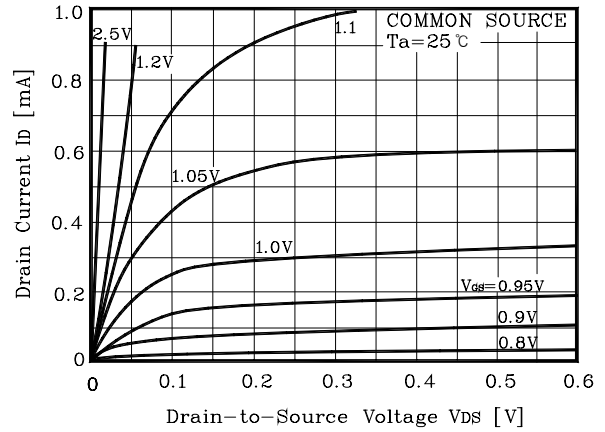


Fig.3 $I_{DR} - V_{DS}$

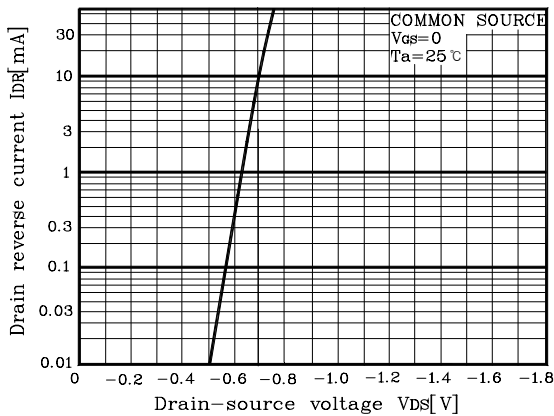


Fig.4 $I_D - V_{GS}$

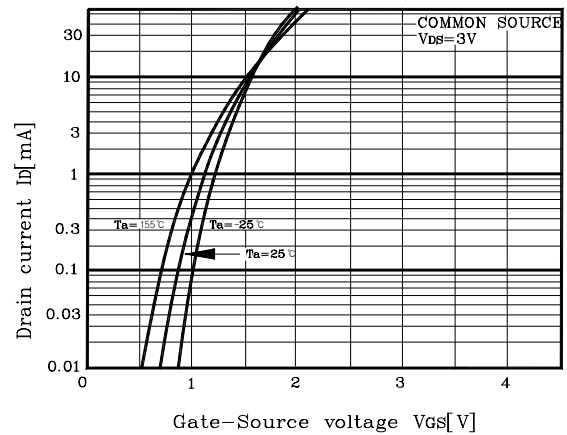


Fig.5 $|Y_{fs}| - I_D$

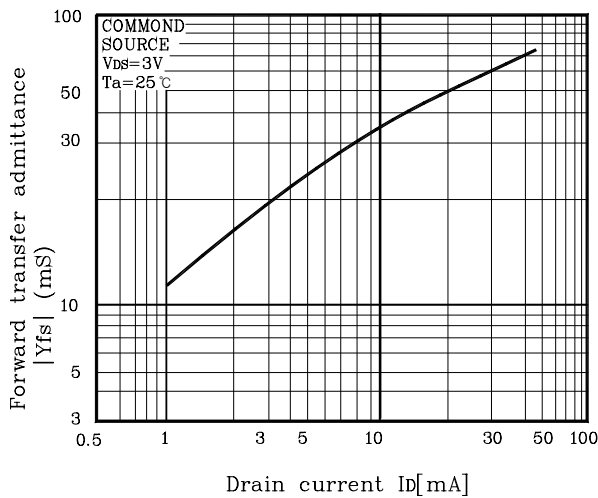
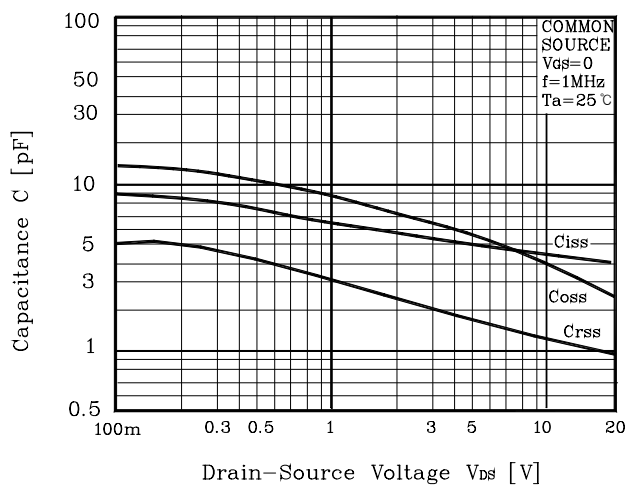


Fig.6 $C - V_{DS}$



Electrical Characteristic Curves

Fig.7 V_{DS} - I_D

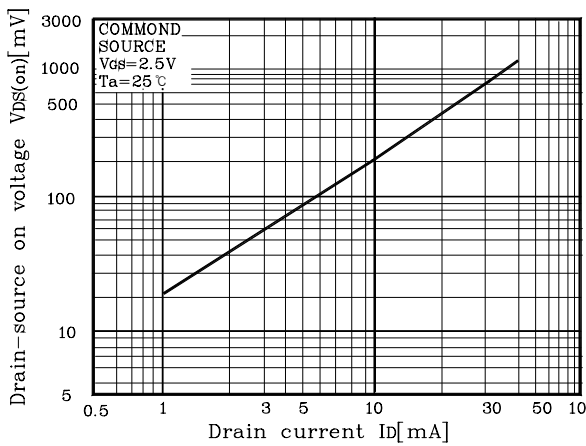
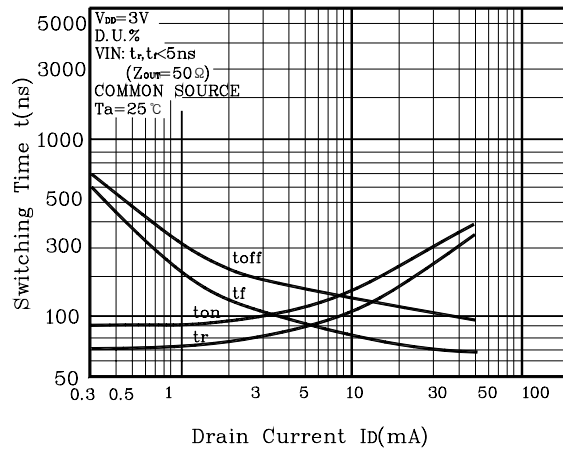


Fig.8 t - I_D



Electrical Characteristic Curves (Q2 : P-CH)

Fig1 I_D - V_{DS}

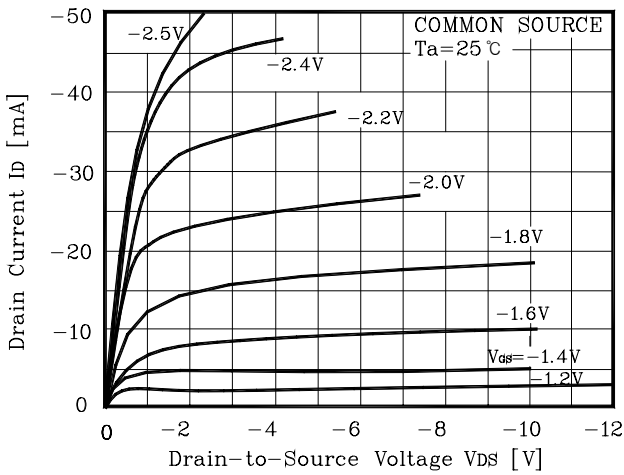


Fig2 I_D - V_{DS}

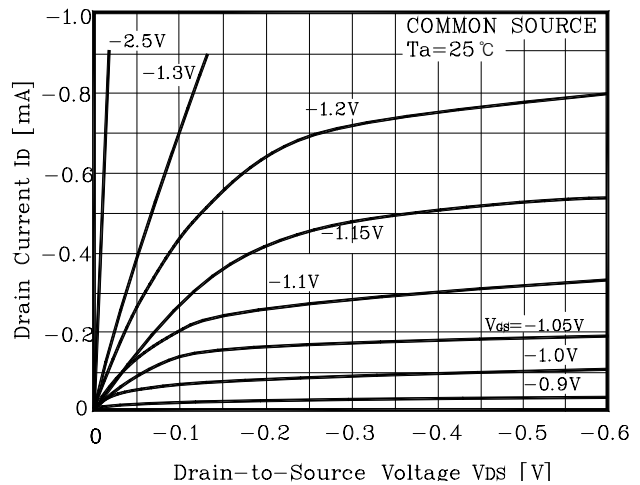


Fig3 I_{DR} - V_{DS}

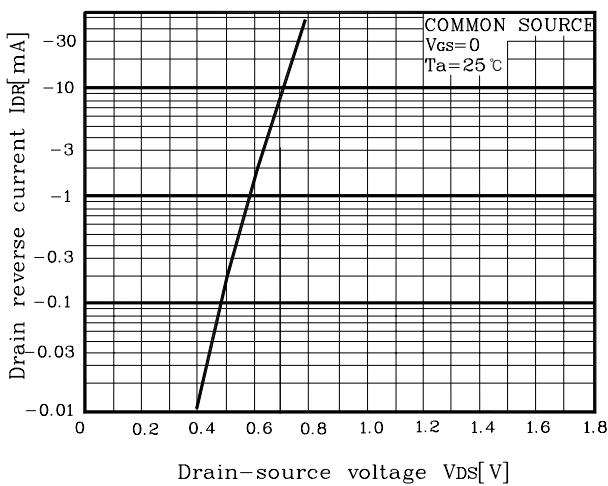


Fig4 I_D - V_{GS}

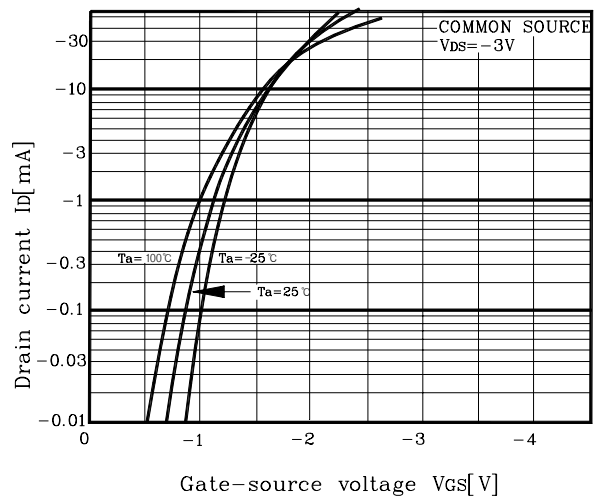


Fig5 | Yfs | - Id

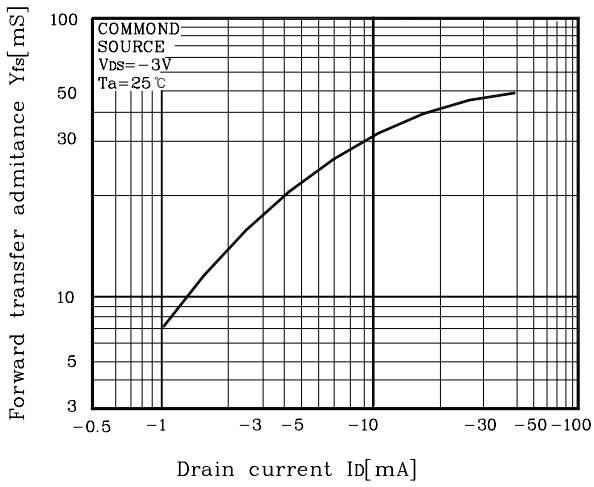


Fig6 C - Vds

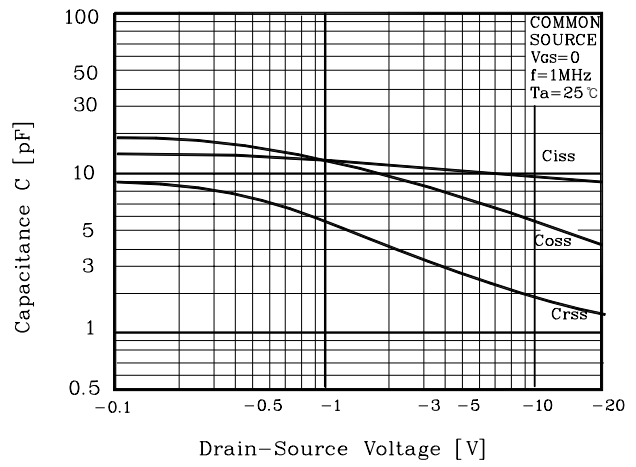


Fig7 VDS(on) - Id

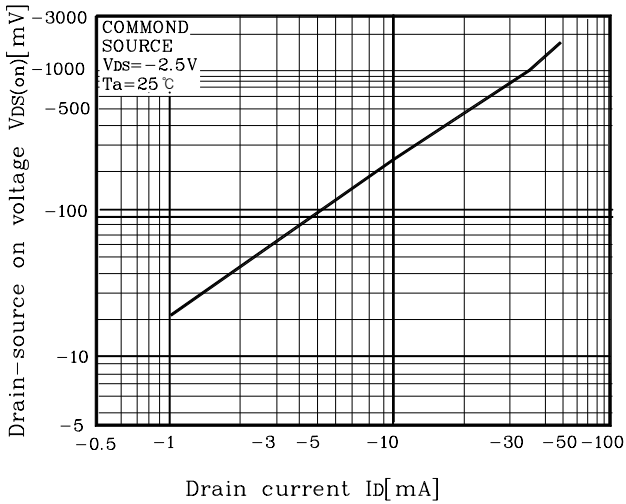


Fig8 t - Id

