

# N-Channel JFET

15 V, 10 to 32 mA, 35 mS, CP

## 2SK3557

### 用途

- AM チューナ RF 増幅用
- ローノイズアンプ用

### 特長

- $|y_{fs}|$  が大きい
- $C_{iss}$  が小さい
- 小型パッケージのため、セットの小型化, 型化が可能である
- 超低雑音指数
- These are Pb-Free Devices

### 製品と外形に伴う情報

- パッケージ名 : CP
- JEITA, JEDEC : SC-59, TO-236, SOT-23, TO-236AB
- 最小梱包単位 : 3,000 Pcs./Reel

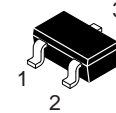
### 絶対最大定格 ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )

項目	記号	条件	定格値	Unit
ドレイン・ソース電圧	$V_{DSX}$		15	V
ゲート・ドレイン電圧	$V_{GDS}$		-15	V
ゲート電流	$I_G$		10	mA
ドレイン電流	$I_D$		50	mA
許容損失	$P_D$		200	mW
接合部温度	$T_J$		150	$^\circ\text{C}$
保存周囲温度	$T_{stg}$		-55~+150	$^\circ\text{C}$

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

#### (参考訳)

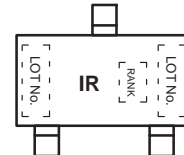
最大定格を超えるストレスは、デバイスにダメージを与える危険性があります。これらの定格値を超えた場合は、デバイスの機能性を損ない、ダメージが生じ、信頼性に影響を及ぼす危険性があります。



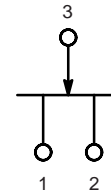
- 1: Source
- 2: Drain
- 3: Gate

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### マーキング



### 電氣的接続図



### ORDERING INFORMATION

Device	パッケージ名	最小梱包単位†
2SK3557-6-TB-E	CP (Pb-Free)	3,000 / Tape & Reel
2SK3557-7-TB-E	CP (Pb-Free)	3,000 / Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

# 2SK3557

## 電気的特性 ELECTRICAL CHARACTERISTICS (Ta = 25°C)

項目	記号	条件	定格値			Unit
			Min	Typ	Max	
ゲート・ドレイン降伏電圧	$V_{(BR)GDS}$	$I_G = -10 \mu A, V_{DS} = 0 V$	-15	-	-	V
ゲートしゃ断電流	$I_{GSS}$	$V_{GS} = -10 V, V_{DS} = 0 V$	-	-	-1.0	nA
ゲート・ソースしゃ断電圧	$V_{GS(off)}$	$V_{DS} = 5 V, I_D = 100 \mu A$	-0.3	-0.7	-1.5	V
ドレイン電流	$I_{DSS}$	$V_{DS} = 5 V, V_{GS} = 0 V$	10*	-	32*	mA
順伝達アドミタンス	$ y_{fs} $	$V_{DS} = 5 V, V_{GS} = 0 V, f = 1 kHz$	24	35	-	mS
入力容量	$C_{iss}$	$V_{DS} = 5 V, V_{GS} = 0 V, f = 1 MHz$	-	10.0	-	pF
帰還容量	$C_{rss}$	$V_{DS} = 5 V, V_{GS} = 0 V, f = 1 MHz$	-	2.9	-	pF
雑音指数	NF	$V_{DS} = 5 V, R_g = 1 k\Omega, I_D = 1 mA, f = 1 kHz$	-	1.0	-	dB

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

(参考訳)

製品パラメータは、特別な記述が無い限り、記載されたテスト条件に対する電気的特性で示しています。異なる条件下で製品動作を行った時には、電気的特性で示している特性を得られない場合があります。

\*2SK3557 は  $I_{DSS}$  により次のように分類している (unit: mA)。

Table 1.

ランク	6	7
$I_{DSS}$	10.0~20.0	16.0~32.0

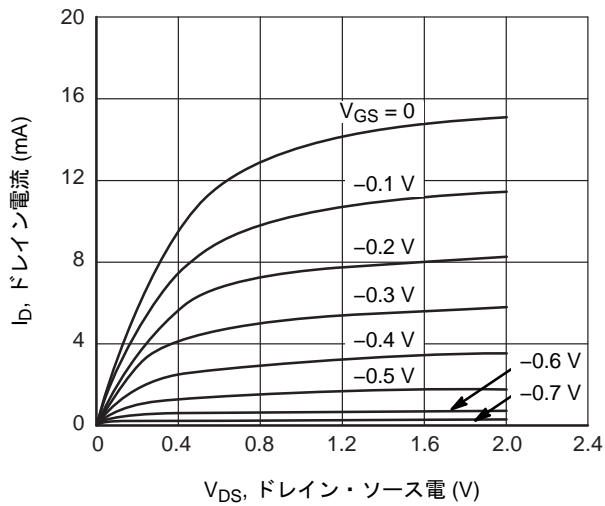


Figure 1.  $I_D - V_{DS}$

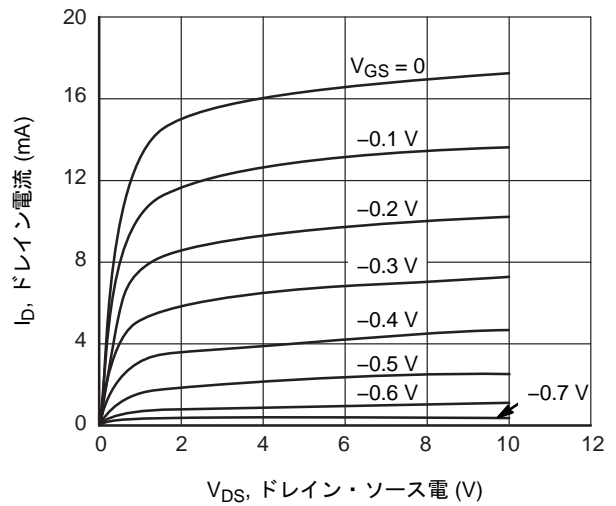


Figure 2.  $I_D - V_{DS}$

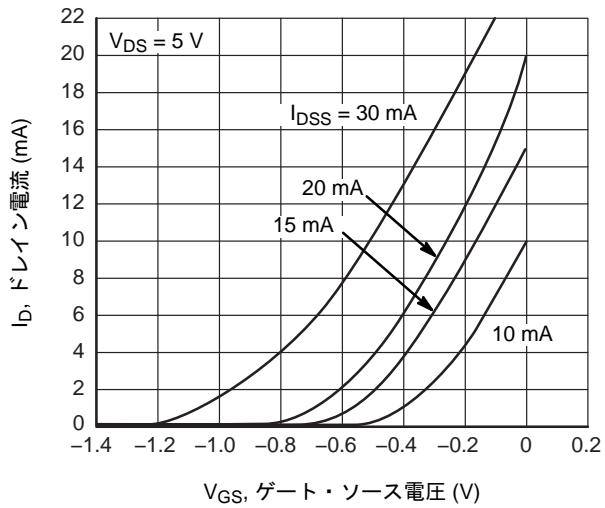


Figure 3.  $I_D - V_{GS}$

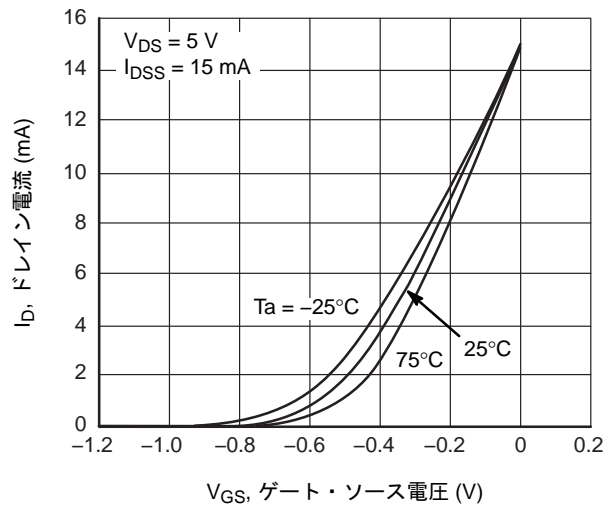


Figure 4.  $I_D - V_{GS}$

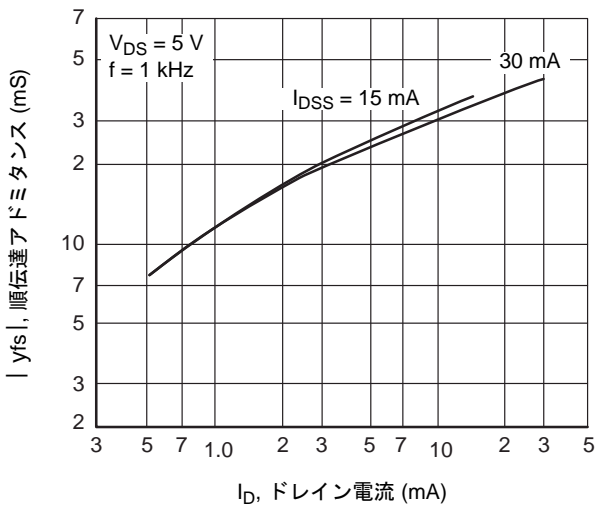


Figure 5.  $|y_{fs}| - I_D$

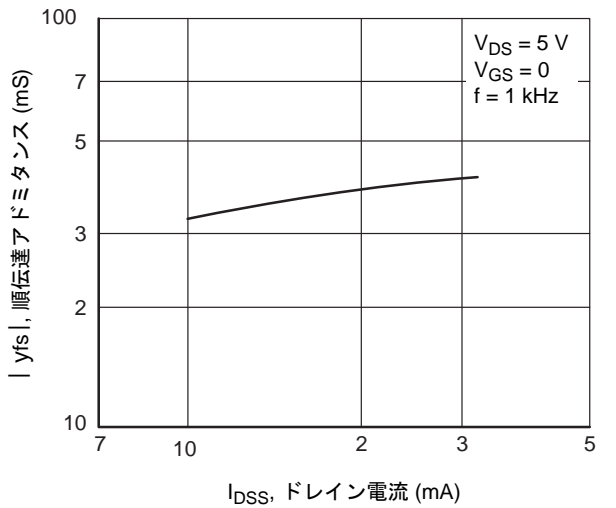
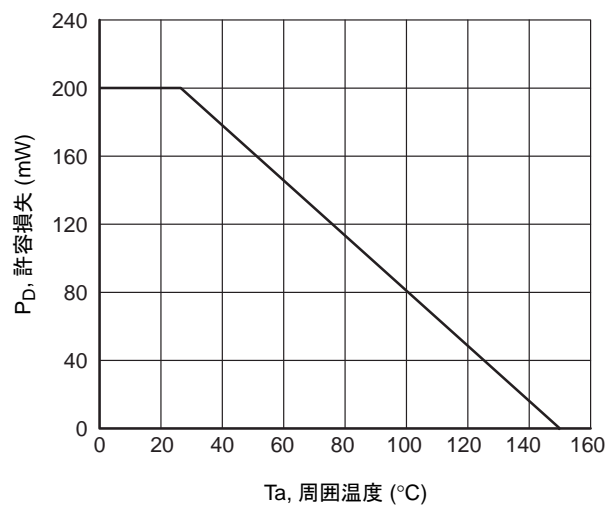
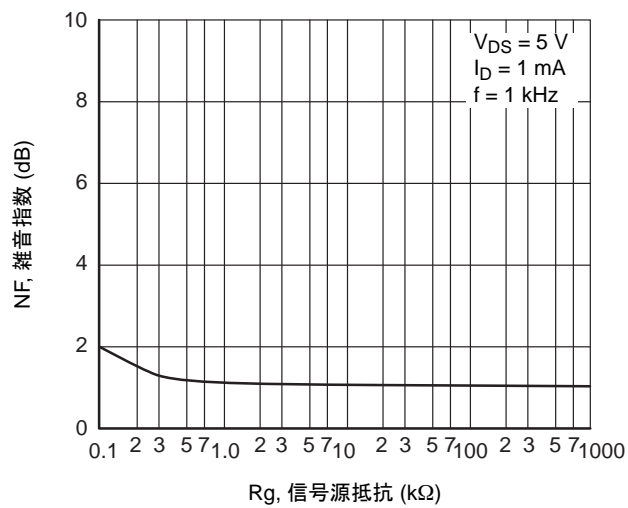
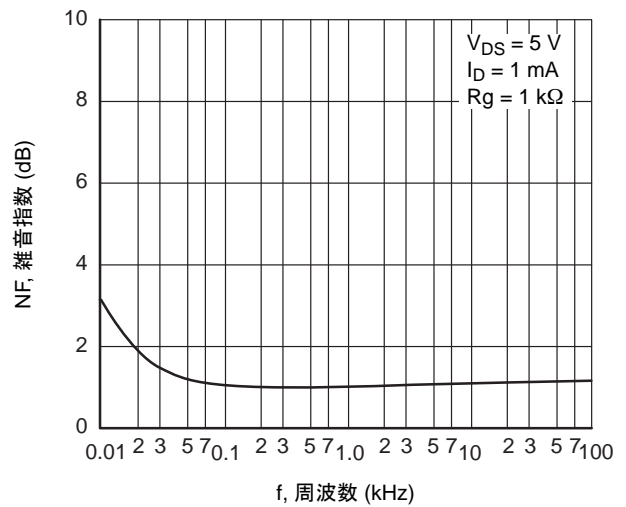
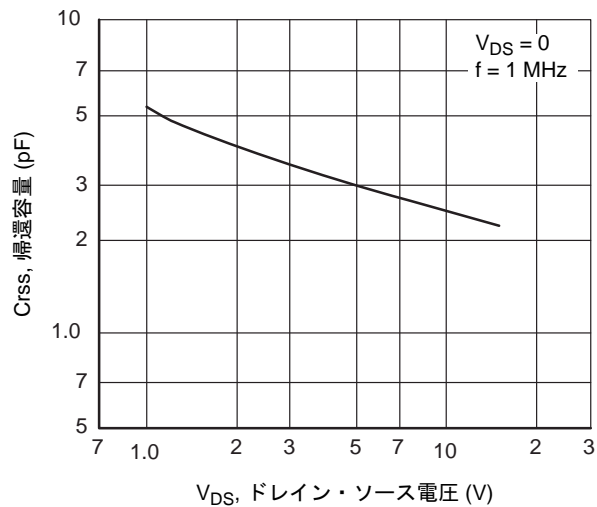
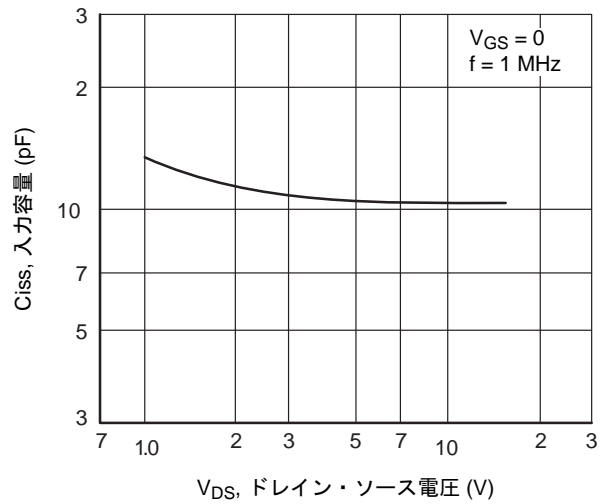
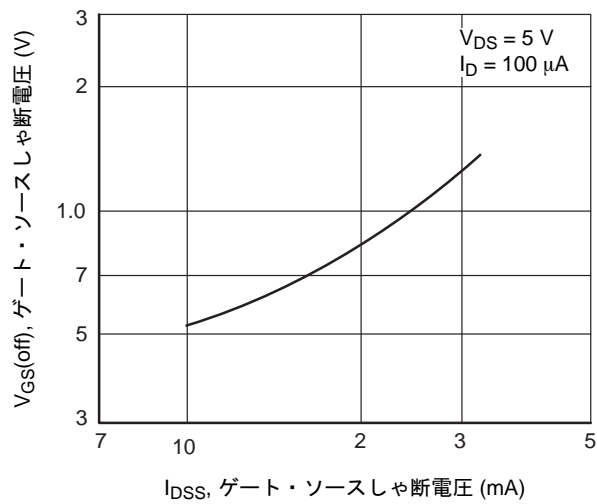


Figure 6.  $|y_{fs}| - I_{DSS}$



## Land Pattern Example

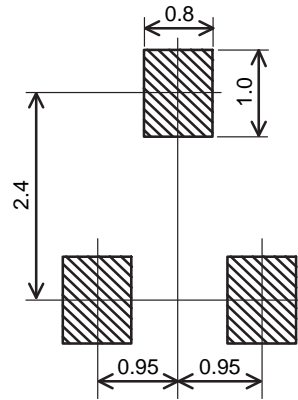


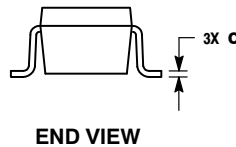
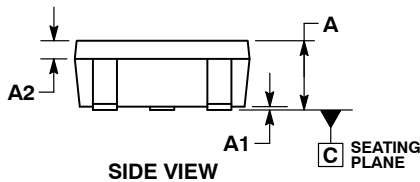
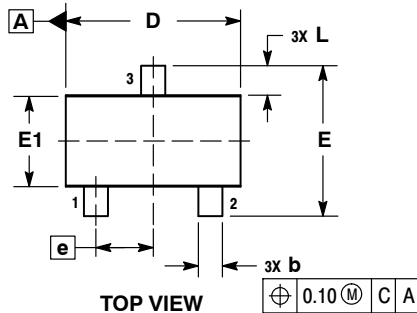
Figure 13. Land Pattern Example



SCALE 2:1

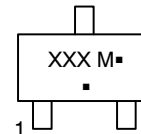
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**ISSUE O**

DATE 09 JAN 2015


**NOTES:**

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. DIMENSIONS D AND E1 DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS. MOLD FLASH, PROTRUSIONS, OR GATE BURRS SHALL NOT EXCEED 0.20 PER SIDE.
4. DIMENSIONS D AND E1 ARE MEASURED AT THE OUTERMOST EXTREME OF THE PLASTIC BODY.
5. DIMENSIONS b AND c APPLY TO THE FLAT SECTION OF THE LEAD BETWEEN 0.10 AND 0.20 FROM THE TIP.

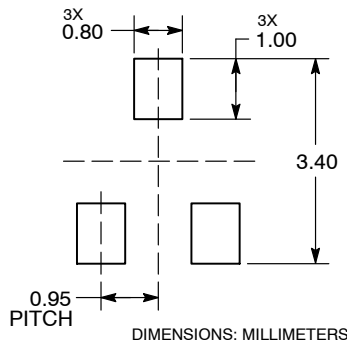
DIM	MILLIMETERS	
	MIN	MAX
A	0.95	1.35
A1	0.00	0.10
A2	0.20	0.40
b	0.35	0.50
c	0.10	0.20
D	2.75	3.05
E	2.30	2.70
E1	1.35	1.65
e	0.95 BSC	
L	0.35	0.75

**GENERIC MARKING DIAGRAM**


XXX = Specific Device Code  
M = Date Code  
▪ = Pb-Free Package

(Note: Microdot may be in either location)

\*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "▪", may or may not be present.

**RECOMMENDED SOLDERING FOOTPRINT\***


\*For additional information on our Pb-Free strategy and soldering details, please download the **onsemi** Soldering and Mounting Techniques Reference Manual, [SOLDERRM/D](#).

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