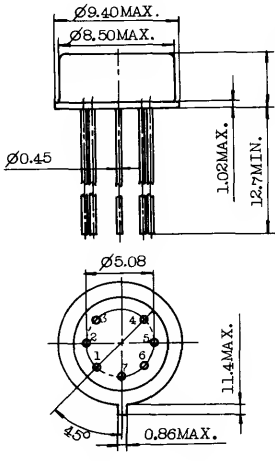
SILICON N CHANNEL JUNCTION DUAL TYPE
(COMPLETELY SEPARATED TYPE)

2SK18
2SK18A

DIFFERENTIAL AMPLIFIER APPLICATIONS.

FEATURES:

- Low Offset : $V_{GS1}-V_{GS2}$ =10mV (Max.)
- Good Tracking
  : $\Delta|V_{GS1}-V_{GS2}|/\Delta Ta$=20μV/°C (Max.). (2SK18A)
- High Input Impedance : I_G=-100pA (Max.)
  at V_{DS}=10V, I_D=400μA.
- Similar Characteristics as 2SK15.



1. SOURCE (1)
2. GATE (1)
3. DRAIN (1)
4. DRAIN (2)
5. GATE (2)
6. SOURCE (2)
7. CASE

JEDEC	—
EIAJ	—
TOSHIBA	2 — 9C1A

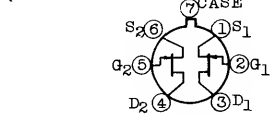
Weight : 0.90g

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Gate-Drain Voltage	V_{GDS}	-40	V
Gate Current	I_G	10	mA
Drain Power Dissipation	P_D	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-65~150	°C

PIN CONNECTION

(BOTTOM VIEW)



ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	I_G	V_{DS}=10V, I_D=400μA	-	-	-0.1	nA
Gate-Drain Breakdown Voltage	$V_{(BR)GDS}$	V_{DS}=0, I_G=-0.1mA	-40	-	-	V
Drain Current	I_{DSS} (Note)	V_{DS}=10V, V_{GS}=0	0.45	-	2.8	mA
Gate-Source Cut-off Voltage	$V_{GS(OFF)}$(Note)	V_{DS}=10V, I_D=0.1μA	-0.65	-	-3.5	V
Forward Transfer Admittance	$\|y_{fs}\|$ (Note)	V_{DS}=10V, V_{GS}=0, f=1kHz	800	-	3000	μS
Input Capacitance	C_{iss}	V_{GD}=0, f=1MHz	-	4.5	6.0	pF
Reverse Transfer Capacitance	C_{rss}	V_{DS}=0, V_{GD}=-10V, f=1MHz	-	2.0	2.5	pF
Drain Current Ratio	$\frac{I_{DSS(small)}}{I_{DDSS(large)}}$	V_{DD}=10V, V_{GS}=0	0.9	-	1.0	
Forward Transfer Admittance Ratio	$\frac{\|y_{fs}\|\ (S)}{\|y_{fs}\|\ (L)}$	V_{DS}=10V, V_{GS}=0, f=1kHz	0.9	-	1.0	
Differential Gate-Source Voltage	$\|V_{GS1}-V_{GS2}\|$	V_{DG}=10V, I_D=400μA	-	-	10	mV
		V_{DG}=10V, I_D=200μA	-	-	10	mV
		V_{DG}=10V, I_D=50μA	-	-	10	mV
Gate-Source Voltage Differential Drift 2SK18	$\frac{\Delta\|V_{GS1}-V_{GS2}\|}{\Delta Ta}$	V_{DS}=10V, I_D=200μA, Ta=0∼60°C	-	-	100	μV/°C
Gate-Source Voltage Differential Drift 2SK18A			-	-	20	μV/°C

Note : According to the value of I_{DSS1}, $V_{GS(OFF)1}$, $V_{GS(OFF)1}$, and $|y_{fs}|_1$, the 2SK18 series are classified as follows.

CLASSIFICATIONS	I_{DSS1} (mA)		$V_{GS(OFF)1}$ (V)		$\|y_{fs}\|_1$ (μS)	
	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
2SK18-R, 2SK18A-R	0.45	0.90	-0.65	-1.8	800	1900
2SK18-O, 2SK18A-O	0.80	1.60	-0.90	-2.5	1000	2300
2SK18-Y, 2SK18A-Y	1.40	2.80	-1.40	-3.5	1300	3000