

N-Channel JFET

2N4859 2N4859A
2N4860 2N4860A
2N4861 2N4861A

SOLID STATE INC.
46 FARRAND STREET
BLOOMFIELD, NEW JERSEY 07003
www.solidstateinc.com

Common Uses

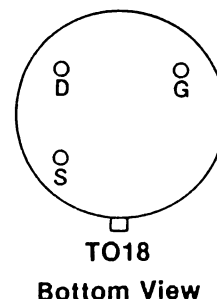
Analog switches
Multiplexer
Sample and hold
Choppers

Features

Low on resistance
High off resistance
Low C_{ps}
High speed switch

Absolute Maximum Ratings (25 °C)

Gate-source - 30 V
Gate-drain - 30 V
Drain-source \pm 30 V
Gate current 10 mA
Device dissipation
(at or below 25 °C free air temperature) 300 mW
Storage range - 65° to + 200 °C



Electrical Characteristics (25 °C unless specified)

DC

Characteristic	Symbol	Test Conditions	2N4859 2N4859A		2N4860 2N4860A		2N4861 2N4861A		Units
			Min	Max	Min	Max	Min	Max	
1. Gate reverse current	I_{GSS}	$V_{DS} = 0, V_{GS} = -20 V$		-0.25		-0.25		-0.25	nA
2.			$T_A = 150^\circ C$		-0.5		-0.5		-0.5
3. Gate-channel break-down voltage	BV_{GSS}	$V_{DS} = 0, I_G = -1 \mu A$	-30		-30		-30		V
4. Gate-source cut off voltage	$V_{GS} (off)$	$V_{DS} = 15 V, I_D = 0.5 nA$	-4	-10	-2	-6	-0.8	-4	
5. Drain-source voltage	$V_{DS} (on)$	$V_{GS} = 0$	$I_D = 20 mA$		0.75				
6.			$I_D = 10 mA$		0.5				
7.			$I_D = 5 mA$				0.5		
8. Saturation drain current (Note 1)	I_{DSS}	$V_{DS} = 15 V, V_{GS} = 0$	50		20	100	8	80	mA
9. Drain cut off current	$I_D (off)$	$V_{DS} = 15 V, V_{GS} = -10 V$			0.25		0.25		nA
10.			$T_A = 150^\circ C$			0.50		0.50	

AC

Characteristic	Symbol	Test Conditions	2N4859-61		2N4859A-61A		2N4860-61		2N4860A-61A		Units
			Min	Max	Min	Max	Min	Max			
11. Input capacitance	C_{iss}	$V_{DS} = 0, V_{GS} = -10 V$ $f = 1 MHz$	18		10		18		10		pF
12.			8		8		8				
13. Feedback capacitance	C_{rss}		8		4		8		3.5		ohms
14.			4		3.5		3.5				
15. Drain-source on resistance	$r_{ds} (on)$	$V_{DS} = 0, I_D = 0$ $f = 1 kHz$	25		40		60				

Switching

Characteristic	Symbol	Test Conditions	Min	Max	Min	Max	Min	Max	Units
16. Turn-on delay time	$t_d (on)$	$V_{DD} = 10 V, V_{GS} (on) = 0$ $I_D (on) = 20 mA, V_{GS} (off) = -10 V, R_L = 464 \Omega$		5		6		8	ns
17. Rise time			t_r		3		4		
18. Turn-off time	$t (off)$	$2N4860, A: 10 mA, -6 V, 953 \Omega$ $2N4861, A: 5 mA, -4 V, 1910 \Omega$		20		40		80	

Notes: 1. Pulse test required, pulse width = 300 μs , duty cycle \leq 3%.

N-Channel JFET

FOR

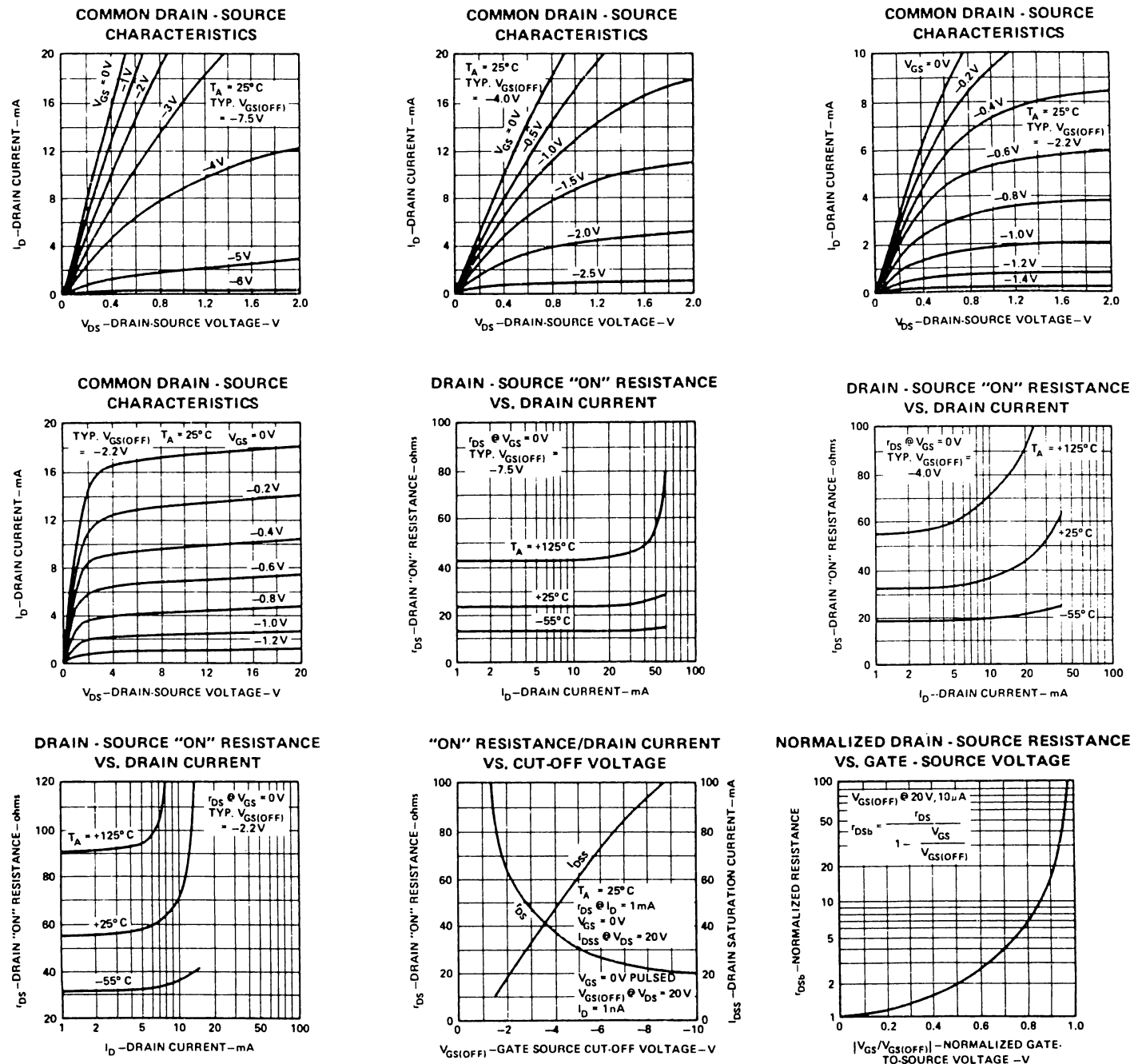
Analog switches
Chopper
Commutators

PACKAGES:

TO18

2N4856-61
2N4856A-61A

Typical Characteristics (25°C unless otherwise noted)



Packaging Information

TO-18
(3 PIN)

