

INTERSIL

2N4856-2N4861 2N4856-2N4858 JAN, JTX, JTXV* N-Channel JFET

1

FEATURES

- $r_{DS(ON)} < 25\Omega$ (2N4856, 2N4859)
- $I_{D(off)} < 250 \mu A$
- Switches ± 10 V Signals with ± 15 V Supplies (2N4858, 2N4861)

ABSOLUTE MAXIMUM RATINGS

@25°C (unless otherwise noted)

Maximum Temperatures

Storage Temperature TO18 -65°C to +200°C
Operating Junction Temperature TO18 +200°C
Lead Temperature (Soldering, 10 sec time limit) +300°C

Maximum Power Dissipation

Device Dissipation @ Free Air Temperature 1.8W
Linear Derating TO18 10mW/°C

Maximum Voltages & Current

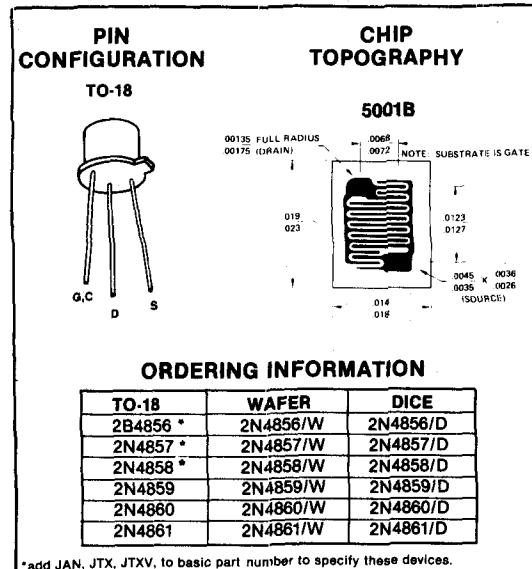
	2N4856-58	2N4859-61
V_{GS} Gate to Source Voltage	-40 V	-30 V
V_{GD} Gate to Drain Voltage	-40 V	-30 V
I_G Gate Current	50 mA	50 mA

ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

CHARACTERISTIC		2N4856,59	2N4857,60	2N4858,61	UNIT	TEST CONDITIONS
		MIN	MAX	MIN	MAX	
BV_{GSS}	2N4856-58	-40	-40	-40	V	$I_G = 1 \mu A, V_{DS} = 0$
	2N4859-61	-30	-30	-30		
I_{GSS}	2N4856-58	-250	-250	-250	pA	$V_{GS} = -20 V, V_{DS} = 0$
	2N4859-61	-500	-500	-500		
$I_{D(off)}$	2N4856-58	250	250	250	pA	$V_{DS} = 15 V, V_{GS} = -10 V$
	2N4859-61	500	500	500		
$V_{GS(off)}$	2N4856-58	-4	-10	-2	V	$V_{DS} = 15 V, I_D = 0.5 nA$
	2N4859-61	-6	-8	-0.8		
$I_{DS(on)}$	2N4856-58	50	20	100	mA	$V_{DS} = 15 V, V_{GS} = 0$
	2N4859-61	8	8	8		
$V_{DS(on)}$	2N4856-58	0.75	0.50	0.50	V (mA)	$V_{GS} = 0, I_D = (-)$
	2N4859-61	(20)	(10)	(5)		
$r_{ds(on)}$	2N4856-58	25	40	60	ohm	$V_{GS} = 0, I_D = 0$
	2N4859-61	18	18	18		
C_{iss}	2N4856-58	18	18	18	pF	$V_{DS} = 0, V_{GS} = -10 V$
	2N4859-61	8	8	8		
t_d	2N4856-58	6	6	10	ns (mA) [V]	$V_{DD} = 10 V, R_L = 464 \Omega$ $2N4856,59$ 953Ω $2N4857,60$ 1910Ω $2N4858,61$
	2N4859-61	(20)	(10)	(5)		
t_r	2N4856-58	3	4	10	ns (mA) [V]	$V_{GE(on)} = 0$ $I_D(on) = (-)$, $V_{GS(off)} = (-)$
	2N4859-61	(20)	(10)	(5)		
t_{off}	2N4856-58	25	50	100	ns (mA) [V]	$RISE TIME 0.25 ns$ $FALL TIME 0.75 ns$ $PULSE WIDTH 100 ns$ $PULSE DUTY CYCLE < 10%$
	2N4859-61	(20)	(10)	(5)		

NOTE:

1. Pulse test required, pulselwidth = 100 μs , duty cycle $\leq 10\%$.



ORDERING INFORMATION

TO-18	WAFER	DICE
2B4856 *	2N4856/W	2N4856/D
2N4857 *	2N4857/W	2N4857/D
2N4858 *	2N4858/W	2N4858/D
2N4859	2N4859/W	2N4859/D
2N4860	2N4860/W	2N4860/D
2N4861	2N4861/W	2N4861/D

*add JAN, JTX, JTXV, to basic part number to specify these devices.

