



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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N-CHANNEL J-FET

Qualified per MIL-PRF-19500/ 385

Devices

2N4856 2N4857 2N4858 2N4859 2N4860 2N4861

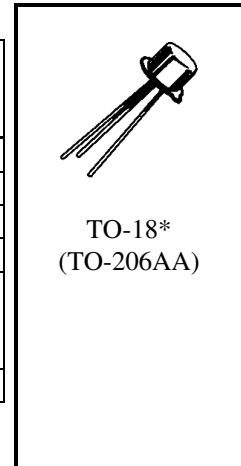
Qualified Level

JAN
JANTX
JANTXV

ABSOLUTE MAXIMUM RATINGS ($T_C = +25^{\circ}\text{C}$ unless otherwise noted)

Parameters / Test Conditions	Symbol	2N4856 2N4857 2N4858	2N4859 2N4860 2N4861	Unit
Gate-Source Voltage	V_{GS}	-40	-30	V
Drain-Source Voltage	V_{DS}	40	30	V
Drain-Gate Voltage	V_{DG}	40	30	V
Gate Current	I_G	50		mA
Power Dissipation	P_T	$T_A = +25^{\circ}\text{C}^{(1)}$		W
		$T_C = +25^{\circ}\text{C}^{(2)}$		W
Operating Junction & Storage Temperature Range	T_j, T_{stg}	-65 to +200		$^{\circ}\text{C}$

- (1) Derate linearly 2.06 mW/ $^{\circ}\text{C}$ for $T_A > 25^{\circ}\text{C}$.
(2) Derate linearly 10.3 mW/ $^{\circ}\text{C}$ for $T_C > 25^{\circ}\text{C}$.



*See appendix A for package outline

ELECTRICAL CHARACTERISTICS ($T_C = 25^{\circ}\text{C}$ unless otherwise noted)

Parameters / Test Conditions	Symbol	Min.	Max.	Units
Gate-Source Breakdown Voltage $V_{DS} = 0, I_G = 1.0 \mu\text{A dc}$	$V_{(BR)GSS}$	-40 -30		Vdc
Gate-Source "Off" State Voltage $V_{DS} = 15 \text{ Vdc}, I_D = 0.5 \eta\text{A dc}$	$V_{GS(on)}$	-4.0 -2.0 -0.8	-10 -6.0 -4.0	Vdc
Gate Reverse Current $V_{DS} = 0, V_{GS} = -20 \text{ Vdc}$ $V_{DS} = 0, V_{GS} = -15 \text{ Vdc}$	I_{GSS}		-0.25 -0.25	ηA
Drain Current $V_{GS} = -10 \text{ Vds}, V_{DS} = 15 \text{ Vdc}$	$I_{D(off)}$		0.25	ηA

2N4856, 2N4857, 2N4858, 2N4859, 2N4860, 2N24861 JAN SERIES

ELECTRICAL CHARACTERISTICS ($T_C = 25^{\circ}\text{C}$ unless otherwise noted) (con't)

Parameters / Test Conditions		Symbol	Min.	Max.	Units	
Drain Current	$V_{GS} = 0, V_{DS} = 15 \text{ Vdc}$	I_{DSS}	50	175	mA	
	2N4856, 2N4859		20	100		
	2N4857, 2N4860 2N4858, 2N4861		8.0	80		
Static Drain - Source "On" State Resistance	$V_{GS} = 0, I_D = 1.0 \text{ mAdc}$	$r_{ds(on)}$		25	Ω	
	2N4856, 2N4859			40		
	2N4857, 2N4860 2N4858, 2N4861			60		
Drain-Source "On" State Voltage	$V_{GS} = 0, I_D = 20 \text{ mAdc}$	$V_{DS(on)}$		0.75	Vdc	
	$V_{GS} = 0, I_D = 10 \text{ mAdc}$			0.50		
	$V_{GS} = 0, I_D = 5.0 \text{ mAdc}$			0.50		
Small-Signal, Common-Source Reverse Transfer Capacitance	$V_{GS} = -10 \text{ Vdc}, V_{DS} = 0, f = 1.0 \text{ MHz}$ $C_1 = 0.1 \mu\text{F}, L_1 = L_2 \geq 500 \mu\text{H}$	C_{rss}		8.0	pF	
Small-Signal, Common-Source Short-Circuit Input Capacitance	$V_{GS} = -10 \text{ Vdc}, V_{DS} = 0, f = 1.0 \text{ MHz}$ $C_1 = 0.1 \mu\text{F}, C_2 = 20.1 \text{ m}$ $FL_1 = L_2 \geq 500 \mu\text{H}$	C_{iss}		18	pF	
Turn-On Delay Time	2N4856, 2N4859 2N4857, 2N4860 2N4858, 2N4861	See Figure 3 of MIL-PRF- 19500/385	t_{don}	6	ηs	
Rise Time	2N4856, 2N4859 2N4857, 2N4860 2N4858, 2N4861			t_r		3
Turn-Off Delay Time	2N4856, 2N4859 2N4857, 2N4860 2N4858, 2N4861			t_{doff}		25
				50	ηs	
				100		

