

2N4856 JAN, JTX, JTXV
2N4857 JAN, JTX, JTXV
2N4858 JAN, JTX, JTXV
2N4859 JAN, JTX, JTXV
2N4860 JAN, JTX, JTXV
2N4861 JAN, JTX, JTXV

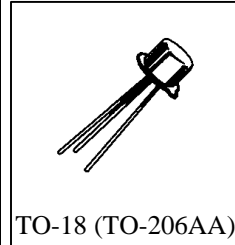


POWER MOSFET N CHANNEL

Processed per MIL-PRF-19500/385

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	$T_A = 25^{\circ}\text{C}$ (1)	P_T	0.36		W
	$T_C = 25^{\circ}\text{C}$ (2)		1.8		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 $T_C > 25^{\circ}\text{C}$.

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

Parameters / Test Conditions		Symbol	Min.	Max.	Units
Gate-Source Breakdown Voltage	$V_{DS} = 0, I_G = 1.0 \mu\text{Adc}$ 2N4856, 2N4857, 2N4858 2N4859, 2N4860, 2N4861	$V_{(BR)GSS}$	-40		Vdc
			-30		
Gate-Source "Off" State Voltage	$V_{DS} = 15 \text{Vdc}, I_D = 0.5 \eta\text{Adc}$ 2N4856, 2N4859 2N4857, 2N4860 2N4858, 2N4861	$V_{GS(on)}$	-4.0	-10	Vdc
			-2.0	-6.0	
			-0.8	-4.0	
Gate Reverse Current	$V_{DS} = 0, V_{GS} = -20 \text{Vdc}$ $V_{DS} = 0, V_{GS} = -15 \text{Vdc}$ 2N4856, 2N4857, 2N4858 2N4859, 2N4860, 2N4861	I_{GSS}		-0.25	ηA
				-0.25	
Drain Current	$V_{GS} = -10 \text{Vds}, V_{DS} = 15 \text{Vdc}$	$I_{D(off)}$		0.25	ηA

2N4856, 2N4857, 2N4858, 2N4859, 2N4860, 2N4861 JAN SERIES

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

Parameters / Test Conditions	Symbol	Min.	Max.	Units
Drain Current $V_{GS} = 0, V_{DS} = 15 \text{ Vdc}$ 2N4856, 2N4859 2N4857, 2N4860 2N4858, 2N4861	I_{DSS}	50 20 8.0	175 100 80	mA
Static Drain - Source "On" State Resistance $V_{GS} = 0, I_D = 1.0 \text{ mAdc}$ 2N4856, 2N4859 2N4857, 2N4860 2N4858, 2N4861	$r_{ds(on)}$		25 40 60	Ω
Drain-Source "On" State Voltage $V_{GS} = 0, I_D = 20 \text{ mAdc}$ 2N4856, 2N4859 $V_{GS} = 0, I_D = 10 \text{ mAdc}$ 2N4857, 2N4860 $V_{GS} = 0, I_D = 5.0 \text{ mAdc}$ 2N4858, 2N4861	$V_{DS(on)}$		0.75 0.50 0.50	Vdc
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