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TECHNICAL DATA

N-CHANNEL J-FET

Qualified per MIL-PRF-19500/385

Devices

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

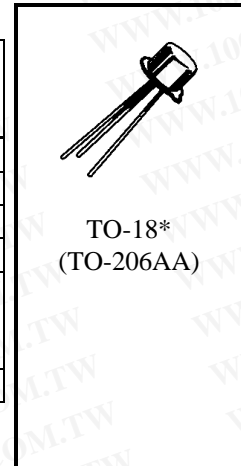
Qualified Level

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



*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 = 25⁰C unless otherwise noted) (con't)

Parameters / Test Conditions		Symbol	Min.	Max.	Units
Drain Current					
V _{GS} = 0, V _{DS} = 15 Vdc	2N4856, 2N4859	I _{DSS}	50	175	mA
	2N4857, 2N4860		20	100	
	2N4858, 2N4861		8.0	80	
Static Drain - Source "On" State Resistance					
V _{GS} = 0, I _D = 1.0 mAdc	2N4856, 2N4859	r _{ds(on)}		25	Ω
	2N4857, 2N4860			40	
	2N4858, 2N4861			60	
Drain-Source "On" State Voltage					
V _{GS} = 0, I _D = 20 mAdc	2N4856, 2N4859	V _{DS(on)}		0.75	Vdc
V _{GS} = 0, I _D = 10 mAdc	2N4857, 2N4860			0.50	
V _{GS} = 0, I _D = 5.0 mAdc	2N4858, 2N4861			0.50	
Small-Signal, Common-Source Reverse Transfer Capacitance					
V _{GS} = -10 Vdc, V _{DS} = 0, f = 1.0 MHz		C _{rss}		8.0	pF
C ₁ = 0.1μF, L ₁ = L ₂ ≥ 500 μH					
Small-Signal, Common-Source Short-Circuit Input Capacitance					
V _{GS} = -10 Vdc, V _{DS} = 0, f = 1.0 MHz		C _{iss}		18	pF
C ₁ = 0.1μF, C ₂ = 20.1 m					
FL ₁ = L ₂ ≥ 500 μH					
Turn-On Delay Time	2N4856, 2N4859	t _{d(on)}		6	ns
	2N4857, 2N4860			6	
	2N4858, 2N4861			10	
Rise Time	2N4856, 2N4859	t _r		3	ns
	2N4857, 2N4860			4	
	2N4858, 2N4861			10	
Turn-Off Delay Time	2N4856, 2N4859	t _{d(off)}		25	ns
	2N4857, 2N4860			50	
	2N4858, 2N4861			100	

See Figure 3
of MIL-PRF-
19500/385