



TECHNICAL DATA

P-CHANNEL J-FET

Qualified per MIL-PRF-19500/476

Devices

Qualified Level

2N5114

2N5115

2N5116

JAN
JANTX
JANTXV

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

Parameters / Test Conditions	Symbol	All Devices	Unit
Gate-Source Voltage ⁽¹⁾	V_{GS}	30	Vdc
Drain-Source Voltage ⁽¹⁾	V_{DS}	30	Vdc
Drain-Gate Voltage	V_{DG}	30	Vdc
Gate Current	I_G	50	mAdc
Power Dissipation $T_A = +25^{\circ}\text{C}$ ⁽²⁾	P_T	0.500	W
Storage Temperature Range	T_{stg}	-65 to +200	$^{\circ}\text{C}$

(1) Symmetrical geometry allows operation of those units with source/drain leads interchanged.

(2) Derate linearly 3.0 mW/ $^{\circ}\text{C}$ for $T_A > 25^{\circ}\text{C}$.



TO-18*
(TO-206AA)

*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 $V_{DS} = 0$, $I_G = 1.0 \mu\text{Adc}$	$V_{(BR)GSS}$	30		Vdc
Drain-Source "On" State Voltage $V_{GS} = 0$ Vdc, $I_D = -15$ mAdc $V_{GS} = 0$ Vdc, $I_D = -7.0$ mAdc $V_{GS} = 0$ Vdc, $I_D = -3.0$ mAdc	$V_{DS(on)}$		1.3 0.8 0.6	Vdc
Gate Reverse Current $V_{DS} = 0$, $V_{GS} = 20$ Vdc	I_{GSS}		500	pAdc
Drain Current Cutoff $V_{GS} = 12$ Vdc, $V_{DS} = -15$ Vdc $V_{GS} = 7.0$ Vdc, $V_{DS} = -15$ Vdc $V_{GS} = 5.0$ Vdc, $V_{DS} = -15$ Vdc	$I_{D(off)}$		-500 -500 -500	pAdc pAdc pAdc



2N5114, 2N5115, 2N5116 JAN SERIES

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

Parameters / Test Conditions		Symbol	Min.	Max.	Units
Zero Gate Voltage Drain Current		I_{DSS}			mAdc
$V_{GS} = 0, V_{DS} = -18 \text{ Vdc}$	2N5114		-30	-90	
$V_{GS} = 0, V_{DS} = -15 \text{ Vdc}$	2N5115		-15	-60	
$V_{GS} = 0, V_{DS} = -15 \text{ Vdc}$	2N5116		-5.0	-25	
Small-Signal Drain - Source "On" State Resistance		$r_{ds(on)}$			Ω
$V_{GS} = 0, I_D = -1.0 \text{ mAdc}$	2N5114			75	
	2N5115			100	
	2N5116			175	
$V_{GS} = 0, I_D = 0; f = 1 \text{ kHz}$	2N5114			75	
	2N5115			100	
	2N5116			175	
Gate-Source Cutoff		$V_{GS(off)}$			Vdc
$V_{DS} = -15, I_D = 1.0 \text{ mAdc}$	2N5114		5.0	10	
$V_{DS} = -15, I_D = 1.0 \text{ mAdc}$	2N5115		3.0	6.0	
$V_{DS} = -15, I_D = 1.0 \text{ mAdc}$	2N5116		1.0	4.0	
Small-Signal, Common-Source Short-Circuit Reverse Transfer Capacitance		C_{rss}			pF
$V_{GS} = 12 \text{ Vdc}, V_{DS} = 0$	2N5114			7.0	
$V_{GS} = 7.0 \text{ Vdc}, V_{DS} = 0$	2N5115				
$V_{GS} = 5.0 \text{ Vdc}, V_{DS} = 0$	2N5116				
Small-Signal, Common-Source Short-Circuit Input Capacitance		C_{iss}			pF
$V_{GS} = 0, V_{DS} = -15 \text{ Vdc}, f = 1.0 \text{ MHz}$	2N5114, 2N5115			25	
	2N5116			27	
Turn-On Delay Time	2N5114 2N5115 2N5116	See Figure 2 of MIL-PRF- 19500/476	t_{don}		ηs
Rise Time	2N5114 2N5115 2N5116		t_r		ηs
Turn-Off Delay Time	2N5114 2N5115 2N5116		t_{doff}		ηs