LINEAR SYSTEMS

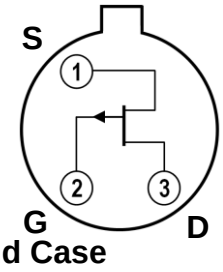
Twenty-Five Years Of Quality Through Innovation

2N5018 SERIES

SINGLE P-CHANNEL JFET SWITCH

FEATURES	
DIRECT REPLACEMENT FOR SILICONIX 2N5018	
ZERO OFFSET VOLTAGE	
LOW ON RESISTANCE	75Ω
ABSOLUTE MAXIMUM RATINGS[1] @ 25 °C (unless otherwise stated)	
Maximum Temperatures	
Storage Temperature	-55 to 150°C
Junction Operating Temperature	-55 to 150°C
Maximum Power Dissipation	
Continuous Power Dissipation[3]	500mW
Maximum Currents	
Gate Current	-10mA
Maximum Voltages	
Gate to Drain	30V
Gate to Source	30V

TO-18
TOP VIEW



STATIC ELECTRICAL CHARACERISTICS @25ºC (unless otherwise stated)

SYM.	CHARACTERISTIC	TYP	2N5018		2N5019		UNITS	CONDITIONS
			MIN	MAX	MIN	MAX		
BV_{GSS}	Gate to Source Breakdown Voltage		30		30		V	I_G = 1µA, V_{DS} = 0V
$V_{GS(off)}$	Gate to Source Cutoff Voltage			10		5		V_{DS} = -15V, I_D = -1µA
$V_{DS(on)}$	Drain to Source On Voltage			-0.5				V_{GS} = 0V, I_D = -6mA
						-0.5		V_{GS} = 0V, I_D = -3mA
I_{DSS}	Drain to Source Saturation Current[2]		-10		-5		mA	V_{DS} = -20V, V_{GS} = 0V
I_{GSS}	Gate Leakage Current			2		2	nA	V_{GS} = 15V, V_{DS} = 0V
$I_{D(off)}$	Drain Cutoff Current			-10		-10		V_{DS} = -15V, V_{GS} = 12V
						-10	µA	V_{DS} = -15V, V_{GS} = 7V
I_{DGO}	Drain Reverse Current			-2		-2	nA	V_{DG} = -15V, I_S = 0A
$r_{DS(on)}$	Drain to Source On Resistance			75		150	Ω	I_D = -1mA, V_{GS} = 0V

DYNAMIC ELECTRICAL CHARACTERISTICS @25ºC (unless otherwise stated)

SYM.	CHARACTERISTIC	TYP	2N5018		2N5019		UNITS	CONDITIONS
			MIN	MAX	MIN	MAX		
$r_{ds(on)}$	Drain to Source On Resistance			75		150	Ω	I_D = -100µA, V_{GS} = 0V *f* = 1kHz
C_{iss}	Input Capacitance			45		45	pF	V_{DS} = -15V, V_{GS} = 0V *f* = 1MHz
C_{rss}	Reverse Transfer Capacitance			10				V_{DS} = 0V, V_{GS} = 12V *f* = 1MHz
						10		V_{DS} = 0V, V_{GS} = 7V *f* = 1MHz

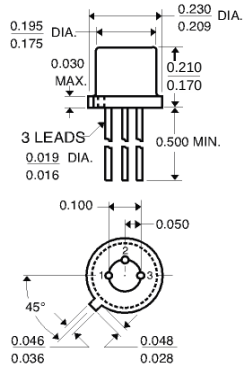
SWITCHING CHARACTERISTICS (max)

SYM.	CHARACTERISTIC	2N5018	2N5019	UNITS
$t_{d(on)}$	Turn On Time	15	15	ns
t_r		20	75	
$t_{d(off)}$	Turn Off Time	15	25	
t_f		50	100	

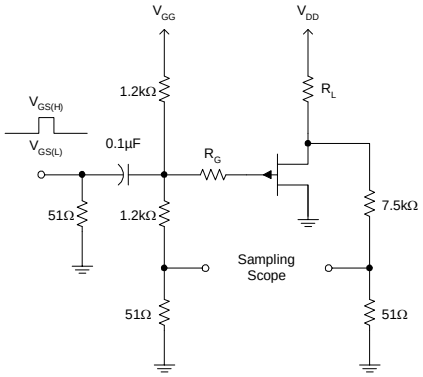
SWITCHING CIRCUIT CHARACTERISTICS

SYM.	2N5018	2N5019
V_{DD}	-6V	-6V
V_{GG}	12V	8V
R_L	910Ω	1.8KΩ
R_G	220Ω	390Ω
$I_{D(on)}$	-6mA	-3mA
$V_{GS(H)}$	0V	0V
$V_{GS(L)}$	12V	7V

TO-18
Three Lead



SWITCHING TEST CIRCUIT



Note: All Dimensions in inches

NOTES

1. Absolute maximum ratings are limiting values above which serviceability may be impaired.
2. Pulse test: PW ≤ 300µs, Duty Cycle ≤ 3%
3. Derate 3mW/°C above 25°C.

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