LINEAR SYSTEMS

SST176
P-CHANNEL JFET

micross

Linear Systems replaces discontinued Siliconix SST176

The SST176 is a single P-Channel JFET switch

This p-channel analog switch is designed to provide low on-resistance and fast switching. When used in combination with the complimentary J/SST111 n-channel family, the SST176 simplifies series-shunt switching applications

SST176 Benefits:

- Low Error Voltage
- High-Speed Analog Circuit Performance
- Negligible "Off-Error," Excellent Accuracy
- Good Frequency Response
- Eliminates Additional Buffering

SST176 Applications:

- Analog Switches
- Choppers
- Sample-and-Hold
- Normally "On" Switches
- Current Limiters

FEATURES	
DIRECT REPLACEMENT FOR SILICONIX SST176	
LOW ON RESISTANCE	$r_{DS(on)} \leq 250\Omega$
LOW GATE OPERATING CURRENT	$I_{D(off)} = 10pA$
FAST SWITCHING	$t_{(ON)}$ 25ns
ABSOLUTE MAXIMUM RATINGS @ 25°C (unless otherwise noted)	
Maximum Temperatures	
Storage Temperature	-55°C to +150°C
Operating Junction Temperature	-55°C to +135°C
Maximum Power Dissipation	
Continuous Power Dissipation	350mW
MAXIMUM CURRENT	
Gate Current (Note 1)	$I_G = -50mA$
MAXIMUM VOLTAGES	
Gate to Drain Voltage	$V_{GDS} = 30V$
Gate to Source Voltage	$V_{GSS} = 30V$

SST176 ELECTRICAL CHARACTERISTICS @ 25°C (unless otherwise noted)

SYMBOL	CHARACTERISTIC	MIN	TYP.	MAX	UNITS	CONDITIONS
BV_{GSS}	Gate to Source Breakdown Voltage	30	--	--	V	$I_G = -1\mu A$, $V_{DS} = 0V$
$V_{GS(F)}$	Gate to Source Forward Voltage	--	-0.7	--		$I_G = -1mA$, $V_{DS} = 0V$
$V_{GS(off)}$	Gate to Source Cutoff Voltage	1	--	4		$V_{DS} = -15V$, $I_D = -10nA$
I_{DSS}	Drain to Source Saturation Current	2	--	-35		$V_{DS} = -15V$, $V_{GS} = 0V$
I_{GSS}	Gate Reverse Current	--	0.01	1	nA	$V_{GS} = 20V$, $V_{DS} = 0V$
I_G	Gate Operating Current	--	0.01	--		$V_{DG} = -15V$, $I_D = -1mA$
$I_{D(off)}$	Drain Cutoff Current	--	-0.01	-1		$V_{DS} = -15V$, $V_{GS} = 0V$
$r_{DS(on)}$	Drain to Source On Resistance	--	--	250	Ω	$V_{GS} = 0V$, $V_{DS} = -0.1V$

SST176 SWITCHING CHARACTERISTICS @ 25°C (unless otherwise noted)

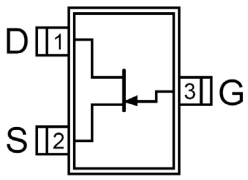
SYMBOL	CHARACTERISTIC		UNITS	CONDITIONS
$t_{d(on)}$	Turn On Time	10	ns	$V_{GS}(L) = 0V$ $V_{GS}(H) = 10V$ See Switching Circuit
t_r	Turn On Rise Time	15		
$t_{d(off)}$	Turn Off Time	10		
t_f	Turn Off Fall Time	20		

Note 1 - Absolute maximum ratings are limiting values above which SST176 serviceability may be impaired.

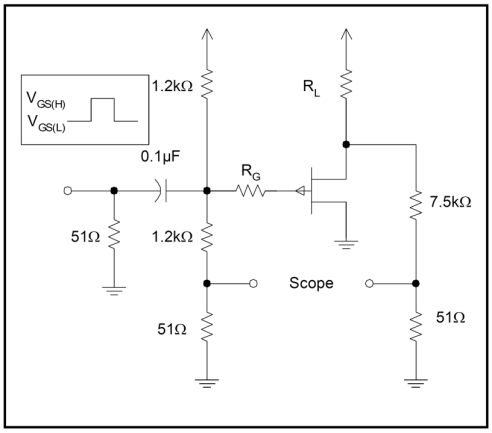
SST176 SWITCHING CIRCUIT PARAMETERS

V_{DD}	-6V
V_{GG}	8V
R_L	1800Ω
R_G	390Ω
$I_{D(on)}$	-3mA

SOT-23 (Top View)



SWITCHING CIRCUIT



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Available Packages:

SST176 in SOT-23
SST176 in bare die.

Please contact Micross for full package and die dimensions