

### J108 – J110 / SST108 – SST110

#### FEATURES

- Low Cost
- Automated Insertion Package
- Low Insertion Loss
- No Offset or Error Voltages Generated by Closed Switch  
Purely Resistive  
High Isolation Resistance from Driver
- Fast Switching
- Low Noise

#### APPLICATIONS

- Analog Switches
- Choppers
- Commutators
- Low-Noise Audio Amplifiers

#### ABSOLUTE MAXIMUM RATINGS

( $T_A = 25^\circ\text{C}$  unless otherwise specified)

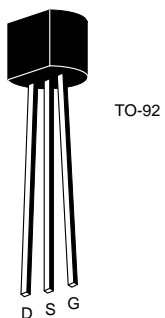
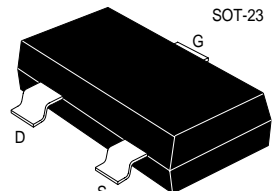
Gate-Drain or Gate-Source Voltage	-25V
Gate Current	50mA
Storage Temperature Range	$-55^\circ\text{C}$ to $+150^\circ\text{C}$
Operating Temperature Range	$-55^\circ\text{C}$ to $+135^\circ\text{C}$
Lead Temperature (Soldering, 10sec)	$+300^\circ\text{C}$
Power Dissipation	360mW
Derate above $25^\circ\text{C}$	$3.3\text{mW}/^\circ\text{C}$

**NOTE:** Stresses above those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions above those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

#### ORDERING INFORMATION

Part	Package	Temperature Range
J108-110	Plastic TO-92	$-55^\circ\text{C}$ to $+135^\circ\text{C}$
XJ108-110	Sorted Chips in Carriers	$-55^\circ\text{C}$ to $+135^\circ\text{C}$
SST109-110	Plastic SOT-23	$-55^\circ\text{C}$ to $+135^\circ\text{C}$

#### PIN CONFIGURATION

PRODUCT MARKING (SOT-23)	
SST108	I08
SST109	I09
SST110	I10

**5018**

#### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

SYMBOL	PARAMETER	108			109			110			UNITS	TEST CONDITIONS
		MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX		
$I_{GSS}$	Gate Reverse Current (Note 1)			-3			-3			-3	nA	$V_{DS} = 0V, V_{GS} = -15V$
$V_{GS(off)}$	Gate-Source Cutoff Voltage	-3		-10	-2		-6	-0.5		-4	V	$V_{DS} = 5V, I_D = 1\mu A$
$BV_{GSS}$	Gate-Source Breakdown Voltage	-25			-25			-25				$V_{DS} = 0V, I_G = -1\mu A$
$I_{DSS}$	Drain Saturation Current (Note 2)	80			40			10			mA	$V_{DS} = 15V, V_{GS} = 0V$
$I_{D(off)}$	Drain Cutoff Current (Note 1)			3			3			3	nA	$V_{DS} = 5V, V_{GS} = -10V$
$r_{DS(on)}$	Drain-Source ON Resistance			8			12			18	$\Omega$	$V_{DS} \leq 0.1V, V_{GS} = 0V$
$C_{dg(off)}$	Drain-Gate OFF Capacitance			15			15			15	pF	$V_{DS} = 0, V_{GS} = -10V$ (Note 3) $f = 1\text{MHz}$
$C_{sg(off)}$	Source-Gate OFF Capacitance			15			15			15		
$C_{dg(on)} + C_{sg(on)}$	Drain-Gate Plus Source-Gate ON Capacitance			85			85			85		
$t_{d(on)}$	Turn On Delay Time		4			4			4		ns	Switching Time Test Conditions (Note 3)
$t_r$	Rise Time		1			1			1			
$t_{d(off)}$	Turn OFF Delay Time		6			6			6			
$t_f$	Fall Time		30			30			30			

- NOTES:**
1. Approximately doubles for every  $10^\circ\text{C}$  increase in  $T_A$ .
  2. Pulse test duration =  $300\mu s$ ; duty cycle  $\leq 3\%$ .
  3. For design reference only, not 100% tested.