



Custom Devices, Inc.

APPLICATIONS

FOR A/D AND D/A CONVERSION, SAMPLE AND HOLD CIRCUITS, AND MULTIPLEXING APPLICATIONS

FEATURES

- HIGH SWITCHING SPEEDS
- COMPATIBLE WITH LOW-LEVEL AND HIGH-LEVEL LOGIC
- ZERO OFFSET VOLTAGE
- HANDLES AC SIGNALS THROUGH ONE MEGAHERTZ

ABSOLUTE MAXIMUM RATINGS @ 25°C unless otherwise noted.

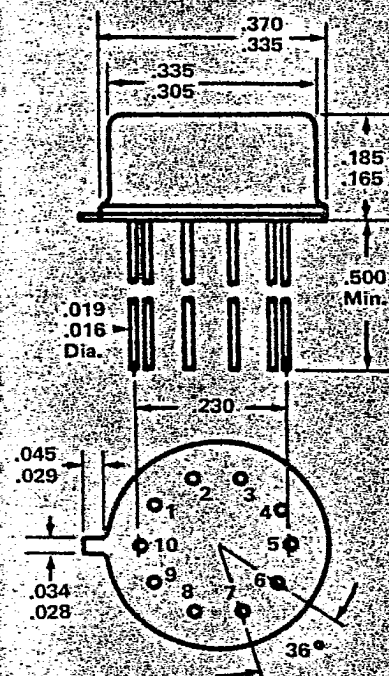
Input Supply Voltages ± 18 Volts
 Storage Temperature -65 to $+150^{\circ}\text{C}$
 Operating Temperature -55 to $+125^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS @ 25°C unless otherwise noted.

SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNIT	TEST CONDITIONS
$R_{DS(ON)}$	Drain to Source "ON" Resistance		30	50	Ohms	$I_S = 1.0\text{mA}$, $V_{SW} = 3\text{V}$
	85°C		50	80	Ohms	$I_S = 1.0\text{mA}$, $V_{SW} = 3\text{V}$
$I_{D(OFF)}$	Drain Cutoff Current		125	150	μA	$V_{DS} = 10\text{V}$, $V_{SW} = 0\text{V}$
$I_{S(OFF)}$	Source Cutoff Current			.5	nA	$V_{DS} = 10\text{V}$, $V_{SW} = 0\text{V}$
C_{DGO}	Drain to Gate Capacitance		5	8	pf	$V_{OG} = 20\text{V}$, $I_S = 0$ $f = 1\text{MHz}$
C_{SGO}	Source to Gate Capacitance		5	8	pf	$V_{SG} = 20\text{V}$, $I_O = 0$ $f = 1\text{MHz}$
t_{ON}	Turn-On Time			.500	μSec	See Figure 5
t_{OFF}	Turn-Off Time			1.00	μSec	See Figure 5
V_{OUT}	DC Output Voltage	± 10			V	See Figure 5
E_{OUT}	AC Output Voltage	20			Vp-p	See Figure 5 $f = 10\text{KHz}$

ANALOG SWITCHES DUAL SPST

DAS 2133 B1



TO-5
10 LEAD

ANALOG SWITCH/DUAL SINGLE POLE—SINGLE THROW

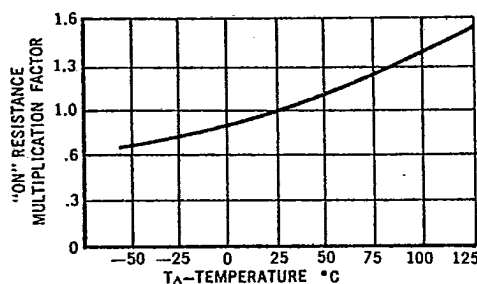


FIGURE 1
DRAIN TO SOURCE "ON"
RESISTANCE vs. TEMPERATURE
(TYPICAL)

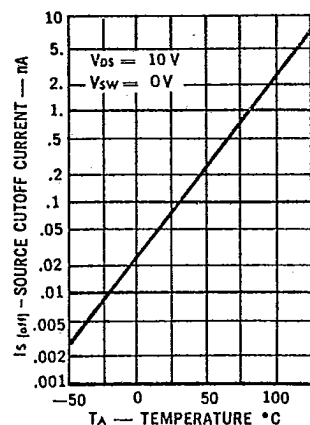


FIGURE 2
 $I_{S(off)}$ vs. TEMPERATURE
(TYPICAL)

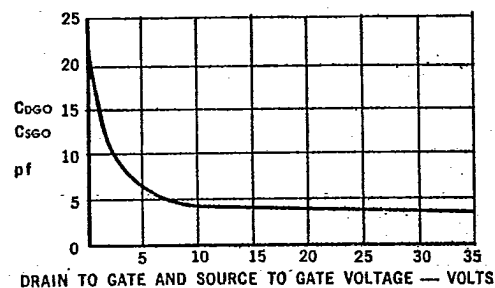


FIGURE 3
DRAIN TO GATE
CAPACITANCE vs. V_{DG}
SOURCE TO GATE
CAPACITANCE vs. V_{SG}
(TYPICAL)

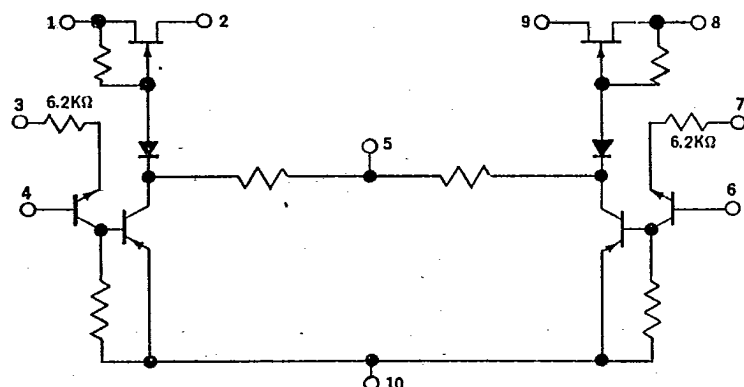


FIGURE 4
ELECTRICAL SCHEMATIC

LOGIC CONFIGURATIONS

T0-5	PINS	4 & 6	3 & 7	2 & 9
Low Level		+3	Ground	ON
Positive Non-Inverting		0	Ground	OFF
Low Level		Ground	-3	ON
Negative Non-Inverting		Ground	0	OFF
High Level		0	-15	ON
Negative Inverting		-15	-15	OFF

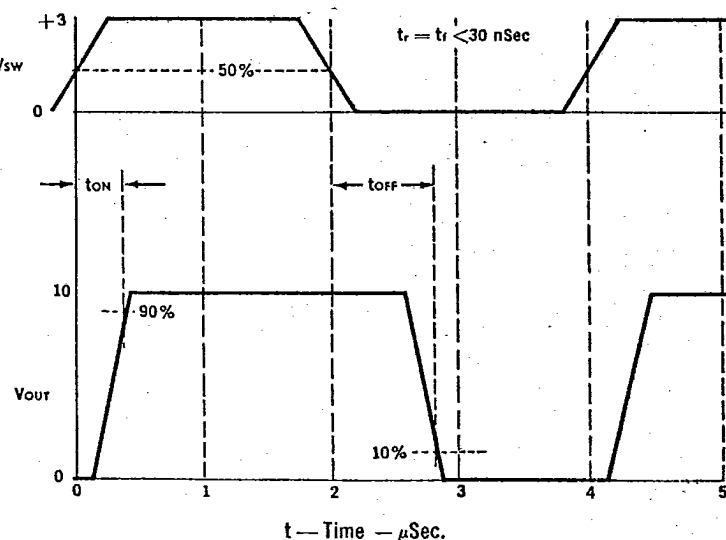
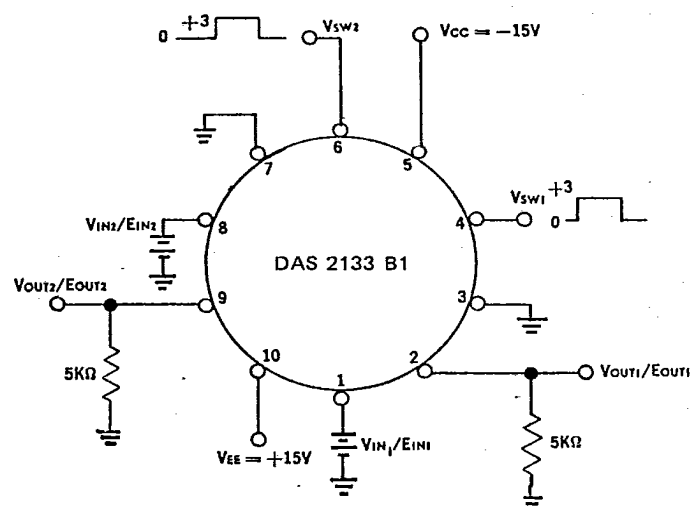


FIGURE 5
SWITCHING TIME AND CLIPPING TEST CIRCUIT

DAS--02133-2x