

# M54565P

8-UNIT 50mA TRANSISTOR ARRAY  
(INPUT "L" ACTIVE)

6249826 MITSUBISHI ELEK (LINEAR)

80C 09306 D T-43-25

### DESCRIPTION

The M54565P, 8-channel sink driver, consists of 7 PNP and 7 NPN transistors connected to form high current gain driver pairs.

### FEATURES

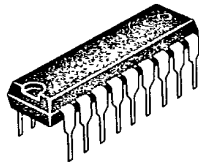
- Output breakdown voltage to 20V
- Output sink current to 50mA
- Wide operating temperature range ( $T_a = -20 \sim +75^\circ\text{C}$ )
- "L" Active Input

### APPLICATION

LED or incandescent display driver, interfacing for standard MOS/BIPOLAR logics

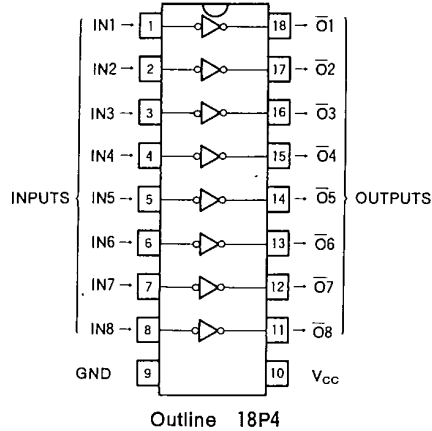
### FUNCTION

The M54565P is comprised of eight PNP-NPN non darlington sink drivers. It functions from 2 V of supply voltage and features low output saturation voltage. The output is turned ON by switching the input low.

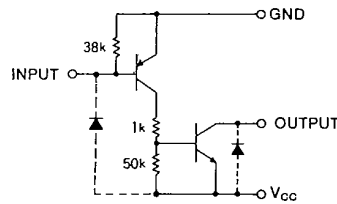


18-pin molded plastic DIP

### PIN CONFIGURATION (TOP VIEW)



### CIRCUIT SCHEMATIC



Unit :  $\Omega$

### ABSOLUTE MAXIMUM RATINGS ( $T_a = -20 \sim +75^\circ\text{C}$ , unless otherwise noted)

Symbol	Parameter	Conditions	Ratings	Unit
$V_{CC}$	Supply voltage		10	V
$V_{CEO}$	Output sustaining voltage	Transistor OFF	-0.5 ~ +20	V
$I_C$	Collector current	Transistor ON	50	mA
$V_I$	Input voltage		0 ~ $V_{CC}$	V
$T_{opr}$	Operating ambient temperature range		-20 ~ +75	$^\circ\text{C}$
$T_{stg}$	Storage temperature range		-55 ~ +125	$^\circ\text{C}$

**RECOMMENDED OPERATIONAL CONDITIONS** ( $T_a = -20 \sim +75^\circ\text{C}$ , unless otherwise noted)

Symbol	Parameter	Limits			Unit
		Min	Typ	Max	
$V_{CC}$	Supply voltage	2		6	V
$V_O$	Output voltage	0		20	V
$I_C$	Collector current	0		20	mA
$I_{IH}$	"H" Input current	-8		8	$\mu\text{A}$
$I_{IL}$	"L" Input current $I_O = 40\text{mA}$	-200		-5000	$\mu\text{A}$

**ELECTRICAL CHARACTERISTICS** ( $T_a = -20 \sim +75^\circ\text{C}$ , unless otherwise noted)

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
$I_{O(\text{leak})}$	Output leakage current	$V_{CC} = 6\text{V}$ , $V_O = 20\text{V}$			50	$\mu\text{A}$
$V_{CE(\text{sat})}$	Output saturation voltage	$V_{CC} = 3\text{V}$ $I_i = -200\mu\text{A}$		0.03	0.17	V
$V_i$	Input voltage	$V_{CC} = 2\text{V}$ , $I_i = -200\mu\text{A}$	1	1.25		V
$I_{CC}$	Supply current	$V_{CC} = 3\text{V}$ , $I_i = -200\mu\text{A}$		2.3	4	mA
$h_{FE}$	DC forward current gain	$V_{CE} = 4\text{V}$ , $V_{CC} = 3\text{V}$ , $I_C = 40\text{mA}$ , $T_a = 25^\circ\text{C}$	800	2500		-

**TYPICAL CHARACTERISTICS**

