

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

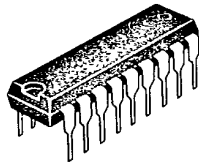
- Output breakdown voltage to 20V
- Output sink current to 50mA
- Wide operating temperature range ($T_a = -20 \sim +75^\circ\text{C}$)
- "L" Active Input

APPLICATION

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

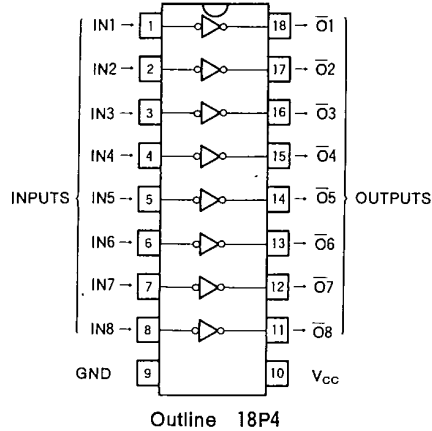
FUNCTION

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.

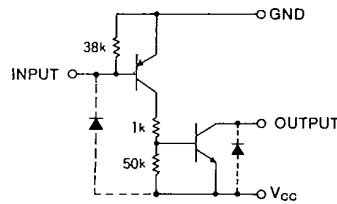


18-pin molded plastic DIP

PIN CONFIGURATION (TOP VIEW)



CIRCUIT SCHEMATIC



Unit : Ω

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)

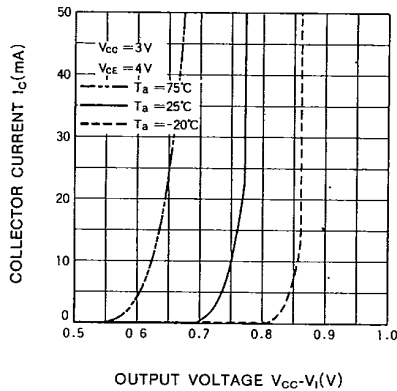
Symbol	Parameter	Limits			Unit
		Min	Typ	Max	
V_{CC}	Supply voltage	2		6	V
V_O	Output voltage	0		20	V
I_C	Collector current	0		20	mA
I_{IH}	"H" Input current	-8		8	μA
I_{IL}	"L" Input current $I_O = 40\text{mA}$	-200		-5000	μA

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	μA
$V_{CE(\text{sat})}$	Output saturation voltage	$V_{CC} = 3\text{V}$ $I_i = -200\mu\text{A}$		0.03	0.17	V
		$I_C = 20\text{mA}$		0.05	0.23	
		$I_C = 40\text{mA}$				
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

OUTPUT CURRENT CHARACTERISTICS



DC CURRENT GAIN CHARACTERISTICS

