

# M54568L

## 4-UNIT 30mA PNP TRANSISTOR ARRAY

### DESCRIPTION

The M54568L, general purpose transistor array, consists of 4 PNP transistors connected in a common-emitter configuration.

### FEATURES

- 20V breakdown
- 30mA output source current capability
- Wide operating temperature range ( $T_a = -20 \sim +75^\circ\text{C}$ )

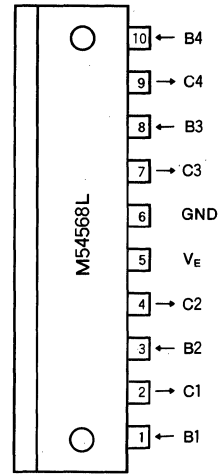
### APPLICATION

LED or incandescent display driver

### FUNCTION

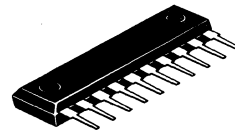
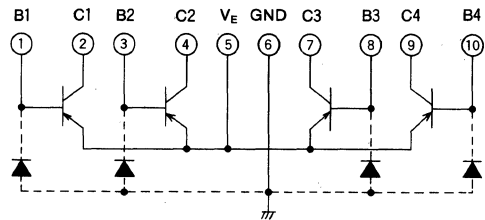
The M54568L is comprised of 4 PNP transistors. ALL emitters are connected to pin 5. Each transistor is capable of switching 30mA and will withstand 20V in the OFF state.

### PIN CONFIGURATION (TOP VIEW)



Outline 10P5

### CIRCUIT SCHEMATIC



10-pin molded plastic SIL

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

Symbol	Parameter	Conditions	Limits	Unit
$V_{CBO}$	Collector-base sustaining voltage	Base voltage : 0V	-40	V
$V_{EBO}$	Emitter-base sustaining voltage	Base voltage : 0V	-40	V
$V_{CEO}$	Collector-emitter sustaining voltage	Emitter voltage : 0V	-20	V
$I_C$	Collector current per transistor		-30	mA
$I_B$	Base current per transistor		-20	mA
$P_d$	Power dissipation	$T_a = 25^\circ\text{C}$	1000	mW
$T_{opr}$	Operating ambient temperature range		$-20 \sim +75$	$^\circ\text{C}$
$T_{stg}$	Storage temperature range		$-55 \sim +125$	$^\circ\text{C}$

**4-UNIT 30mA PNP TRANSISTOR ARRAY**

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

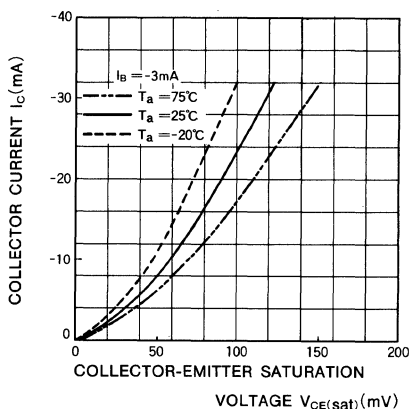
Symbol	Parameter	Limits			Unit
		Min	Typ	Max	
$I_C$	Collector current $I_B = -3\text{mA}$	0		-20	mA
$I_B$	Base current	0		-10	mA
$V_E$	Emitter current	-0.3		20	V
$V_B$	Base voltage	-0.3		$V_E$	V

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

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CBO}$	Collector-emitter sustaining voltage	$I_C = -10\mu\text{A}$ , $V_B = 0\text{V}$ , $V_E$ : OPEN	-40			V
$V_{(BR)EBO}$	Emitter-base sustaining voltage	$I_E = -10\mu\text{A}$ , $V_B = 0\text{V}$ , $V_C$ : OPEN	-40			V
$V_{(BR)CEO}$	Collector-emitter sustaining voltage	$I_C = -100\mu\text{A}$ , $V_E = 0\text{V}$ , $V_B$ : OPEN	-20			V
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C = -20\text{mA}$ , $I_B = -3\text{mA}$ , $V_E = 5\text{V}$			-0.3	V
		$I_C = -2\text{mA}$ , $I_B = -0.2\text{mA}$ , $V_E = 5\text{V}$			-0.28	
$h_{FE}$	DC forward current gain	$V_{CE} = -4\text{V}$ $T_a = 25^\circ\text{C}$	$I_C = -2\text{mA}$	20		
			$I_C = -20\text{mA}$	15		

**TYPICAL CHARACTERISTICS**

**OUTPUT CHARACTERISTICS**



**DC CURRENT GAIN CHARACTERISTICS**

