

NPN SILICON POWER TRANSISTOR ARRAY  
 LOW SPEED SWITCHING USE  
 INDUSTRIAL USE

DESCRIPTION

The  $\mu$ PA1434 is NPN silicon epitaxial Power Transistor Array that built in 4 circuits designed for driving solenoid, relay, lamp and so on.

FEATURES

- Easy mount by 0.1 inch of terminal interval.
- High  $h_{FE}$ . LOW  $V_{CE(sat)}$ .  
 $h_{FE} = 800$  to  $3200$  (at  $I_c = 0.5$  A)  
 $V_{CE(sat)} = 0.5$  V MAX. (at  $I_c = 2$  A)

ORDERING INFORMATION

Part Number	Package	Quality Grade
$\mu$ PA1434H	10 Pin SIP	Standard

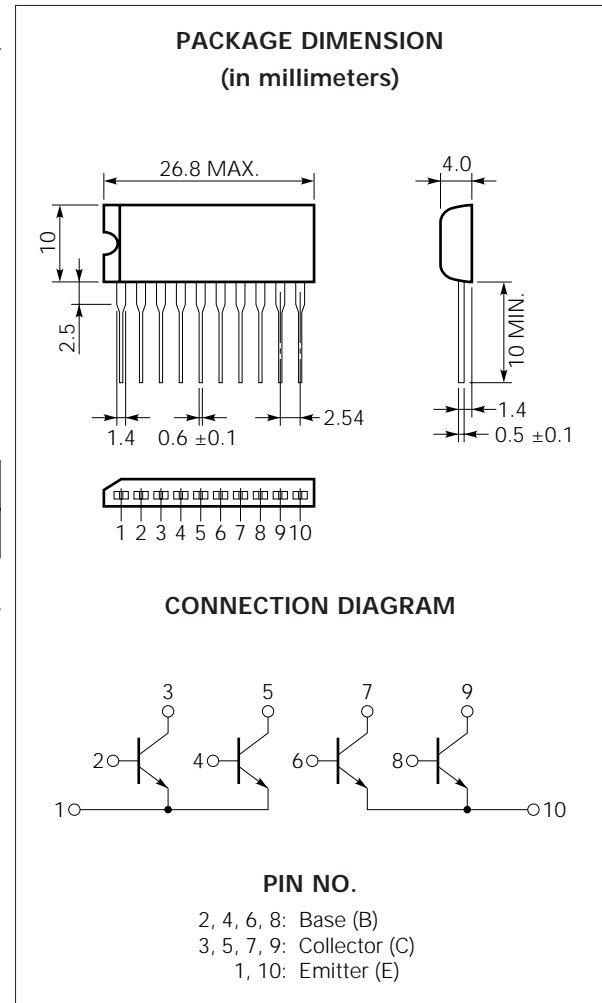
Please refer to "Quality grade on NEC Semiconductor Device" (Document number IEI-1209) published by NEC Corporation to know the specification of quality grade on the devices and its recommended applications.

ABSOLUTE MAXIMUM RATINGS ( $T_a = 25$  °C)

Collector to Base Voltage	$V_{CBO}$	60	V
Collector to Emitter Voltage	$V_{CEO}$	60	V
Emitter to Base Voltage	$V_{EBO}$	7	V
Collector Current (DC)	$I_{C(DC)}$	3	A/unit
Collector Current (pulse)	$I_{C(pulse)^*}$	6	A/unit
Base Current (DC)	$I_{B(DC)}$	0.6	A/unit
Total Power Dissipation	$P_{T1}^{**}$	3.5	W
(T <sub>a</sub> = 25 °C)			
Total Power Dissipation	$P_{T2}^{**}$	28	W
(T <sub>c</sub> = 25 °C)			
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

\* PW ≤ 300 μs, Duty Cycle ≤ 10 %

\*\* 4 Circuits



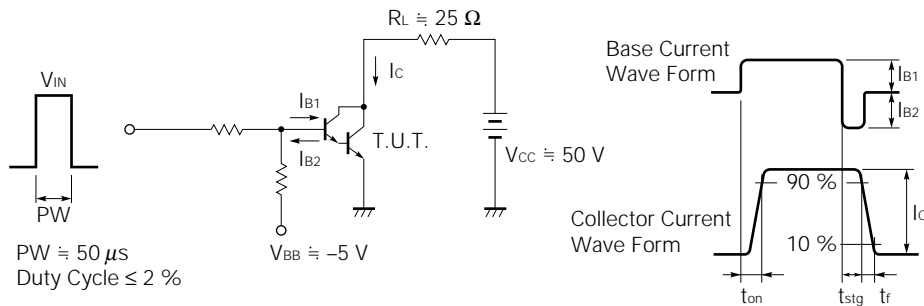
The information in this document is subject to change without notice.

**ELECTRICAL CHARACTERISTICS (T<sub>a</sub> = 25 °C)**

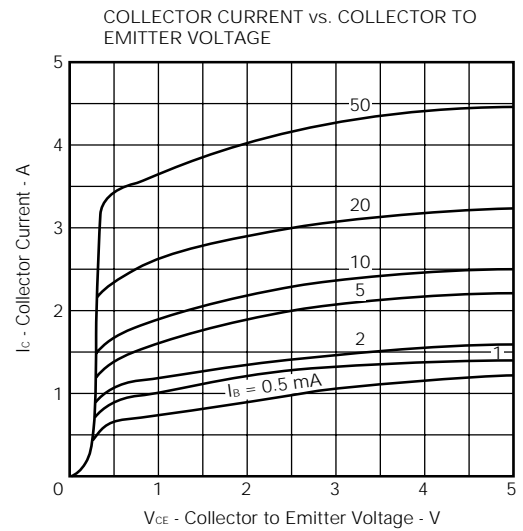
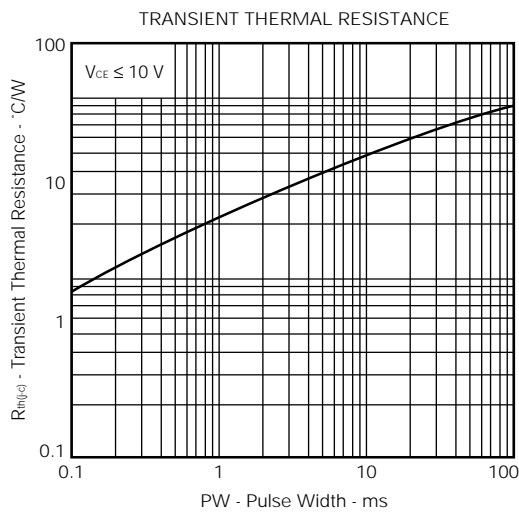
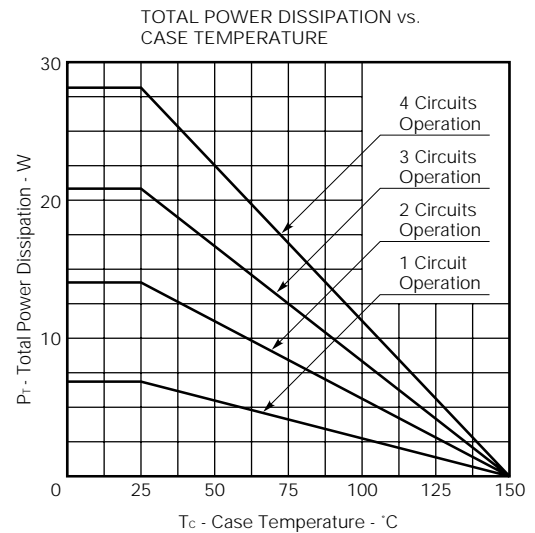
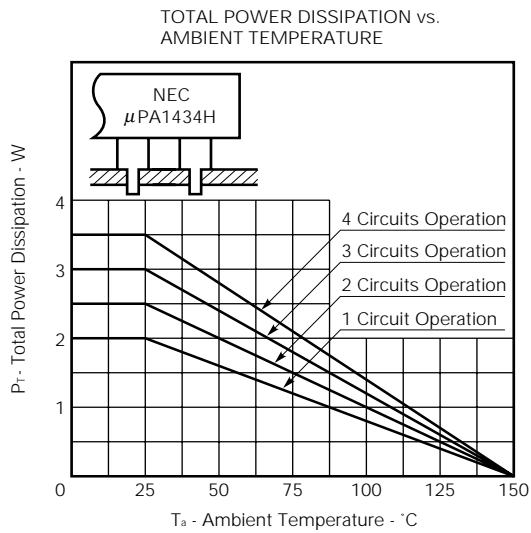
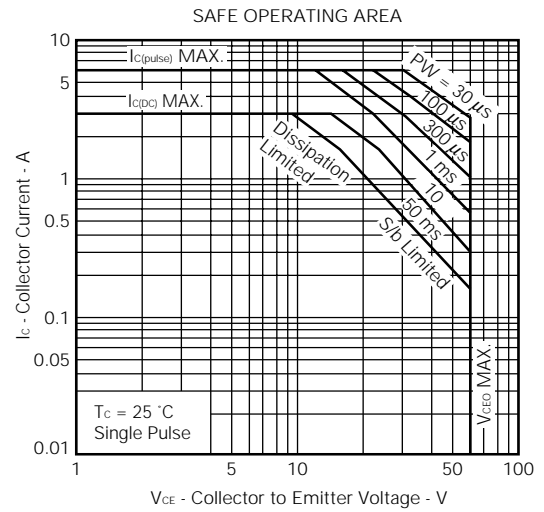
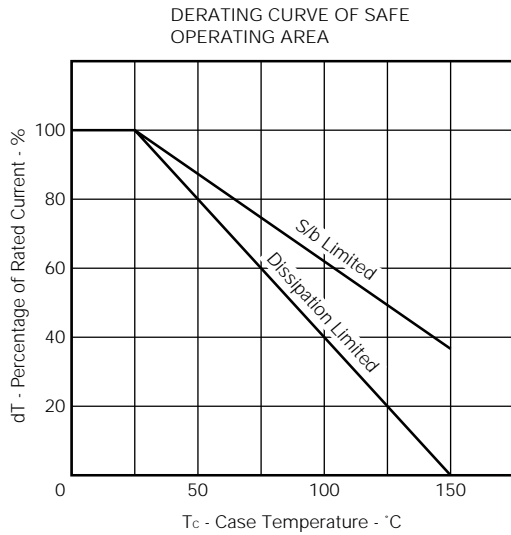
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Leakage Current	I <sub>CBO</sub>			10	μA	V <sub>CB</sub> = 60 V, I <sub>E</sub> = 0
Emitter Leakage Current	I <sub>EBO</sub>			10	μA	V <sub>EB</sub> = 5 V, I <sub>C</sub> = 0
DC Current Gain	h <sub>FE1</sub> *	800		3200	—	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 0.5 A
DC Current Gain	h <sub>FE2</sub> *	500			—	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 3 A
Collector Saturation Voltage	V <sub>CE(sat)</sub> *			0.5	V	I <sub>C</sub> = 2 A, I <sub>B</sub> = 20 mA
Base Saturation Voltage	V <sub>BE(sat)</sub> *			1.2	V	I <sub>C</sub> = 2 A, I <sub>B</sub> = 20 mA
Turn On Time	t <sub>on</sub>		1		μs	I <sub>C</sub> = 2 A I <sub>B1</sub> = -I <sub>B2</sub> = 10 mA V <sub>CC</sub> ≅ 50 V, R <sub>L</sub> ≅ 25 Ω
Storage Time	t <sub>stg</sub>		3		μs	
Fall Time	t <sub>f</sub>		1.5		μs	

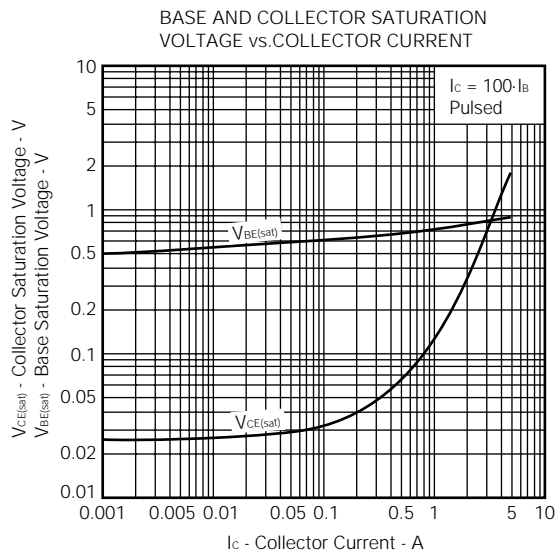
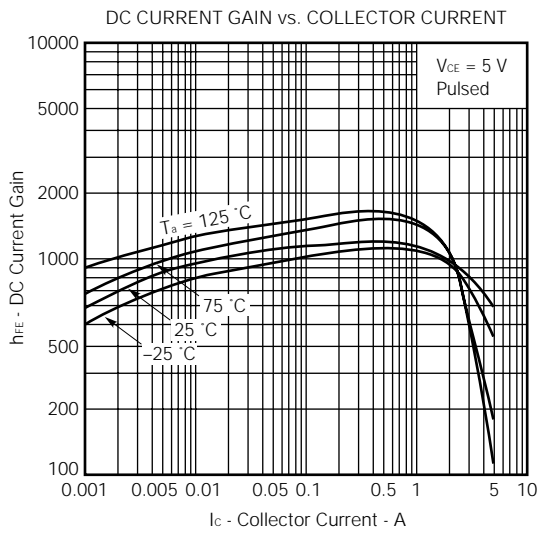
\* PW ≤ 350 μs, Duty Cycle ≤ 2 % /pulsed

**SWITCHING TIME TEST CIRCUIT**



TYPICAL CHARACTERISTICS ( $T_a = 25\text{ }^\circ\text{C}$ )





## REFERENCE

Document Name	Document No.
NEC semiconductor device reliability/quality control system.	TEI-1202
Quality grade on NEC semiconductor devices.	IEI-1209
Semiconductor device mounting technology manual.	IEI-1207
Semiconductor device package manual.	IEI-1213
Guide to quality assurance for semiconductor devices.	MEI-1202
Semiconductor selection guide.	MF-1134

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Application examples recommended by NEC Corporation

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Special: Automotive and Transportation equipment, Traffic control systems, Antidisaster systems, Anticrime systems, etc.

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