

NPN SILICON POWER TRANSISTOR ARRAY
 LOW SPEED SWITCHING USE
 INDUSTRIAL USE

DESCRIPTION

The μ 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
μ PA1434H	10 Pin SIP	Standard

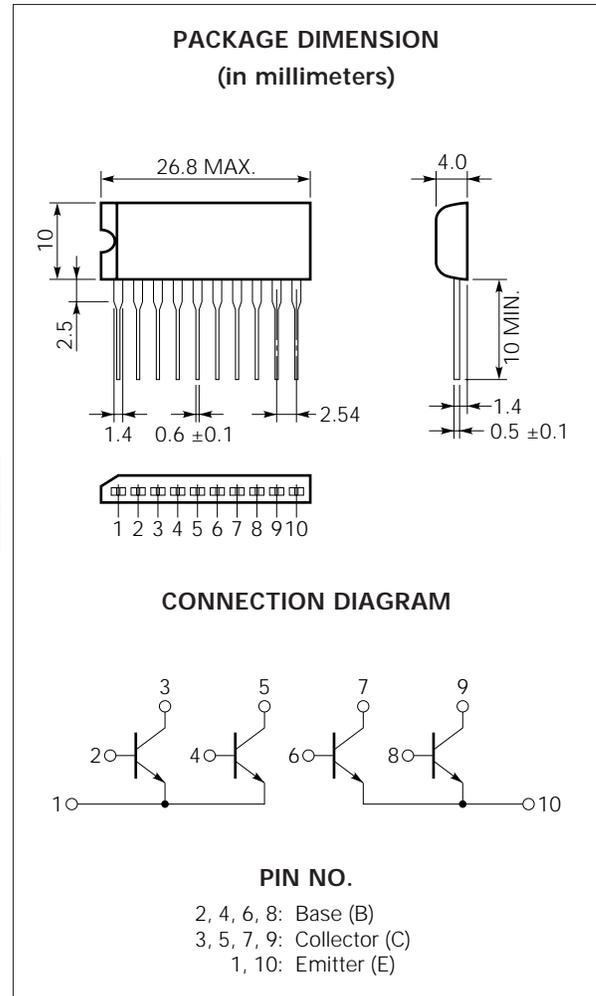
Please refer to "Quality grade on NEC Semiconductor Device" (Document number IEI-1209) published by NEC Corporation to know the specification of quality grade on the devices and its recommended applications.

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 _a = 25 °C)			
Total Power Dissipation	P_{T2}^{**}	28	W
(T _c = 25 °C)			
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

* PW ≤ 300 μ s, Duty Cycle ≤ 10 %

** 4 Circuits



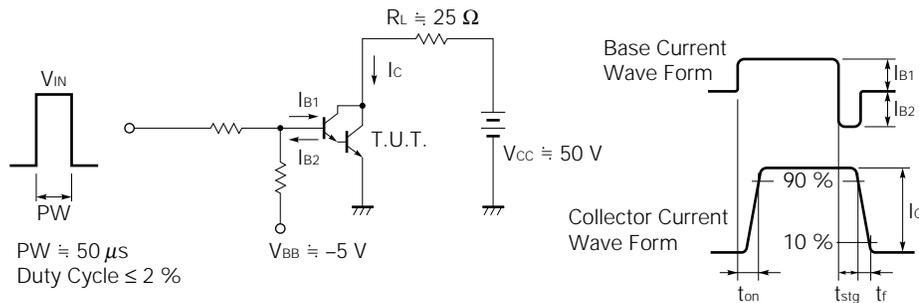
The information in this document is subject to change without notice.

ELECTRICAL CHARACTERISTICS (T_a = 25 °C)

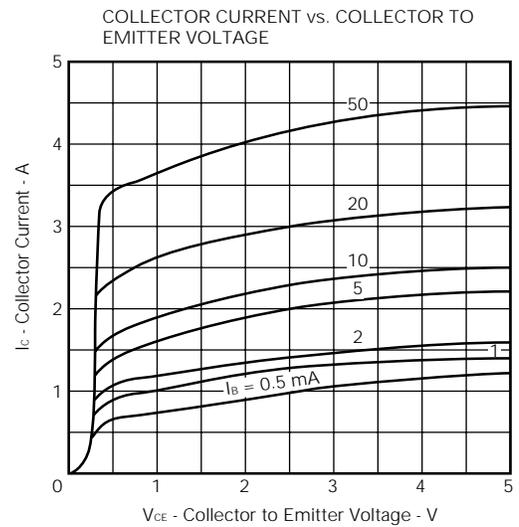
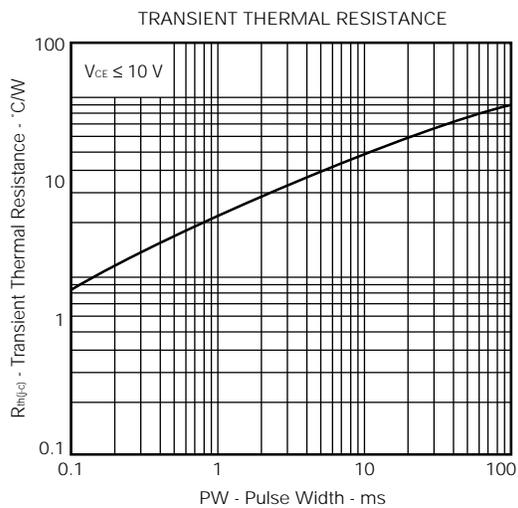
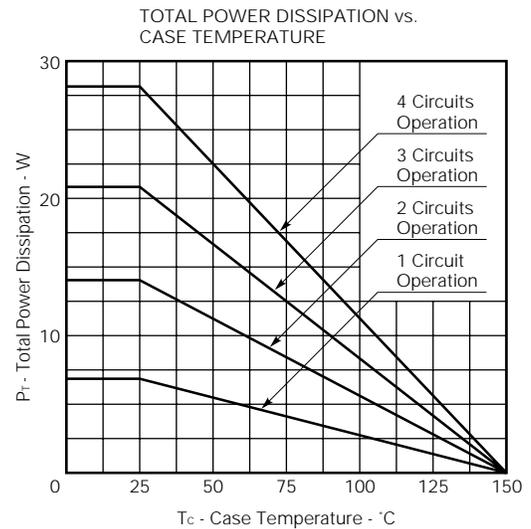
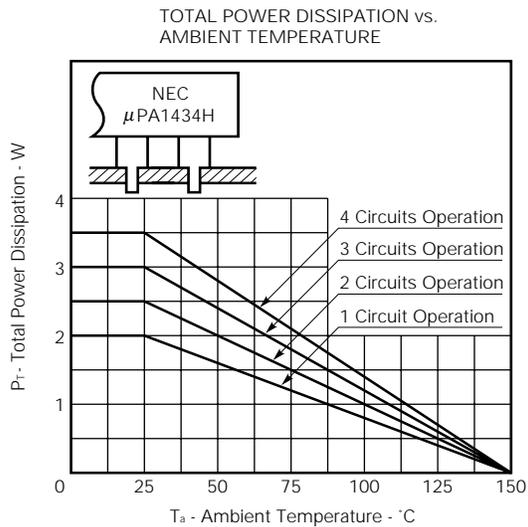
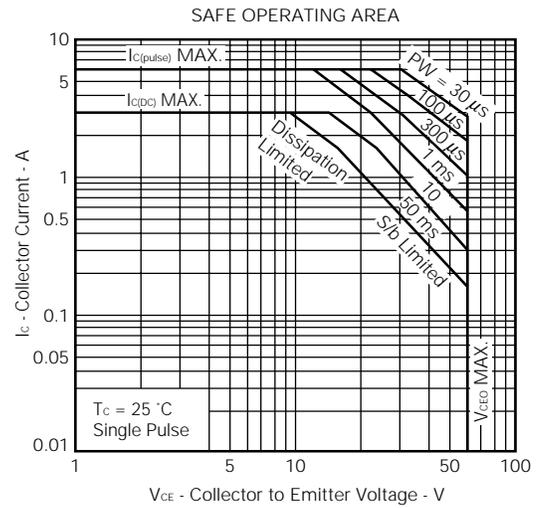
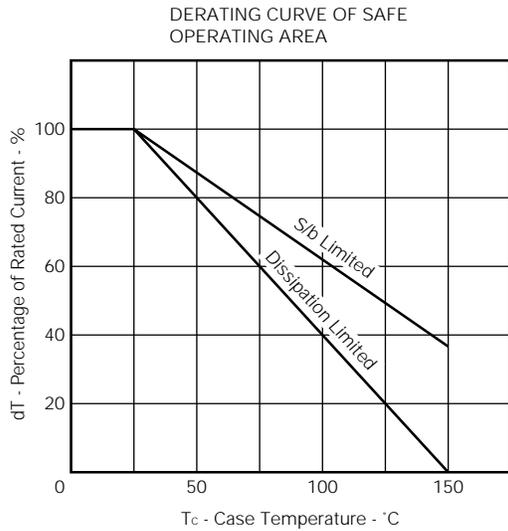
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Leakage Current	I _{CBO}			10	μA	V _{CB} = 60 V, I _E = 0
Emitter Leakage Current	I _{EBO}			10	μA	V _{EB} = 5 V, I _C = 0
DC Current Gain	h _{FE1} *	800		3200	—	V _{CE} = 5 V, I _C = 0.5 A
DC Current Gain	h _{FE2} *	500			—	V _{CE} = 5 V, I _C = 3 A
Collector Saturation Voltage	V _{CE(sat)} *			0.5	V	I _C = 2 A, I _B = 20 mA
Base Saturation Voltage	V _{BE(sat)} *			1.2	V	I _C = 2 A, I _B = 20 mA
Turn On Time	t _{on}		1		μS	I _C = 2 A I _{B1} = -I _{B2} = 10 mA V _{CC} ≐ 50 V, R _L ≐ 25 Ω See test circuit
Storage Time	t _{stg}		3		μS	
Fall Time	t _f		1.5		μS	

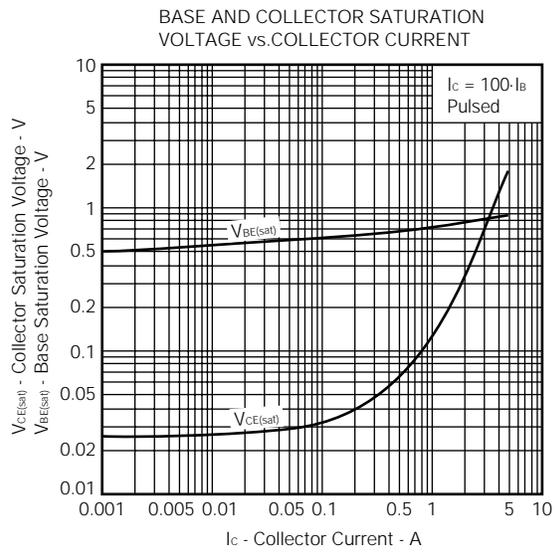
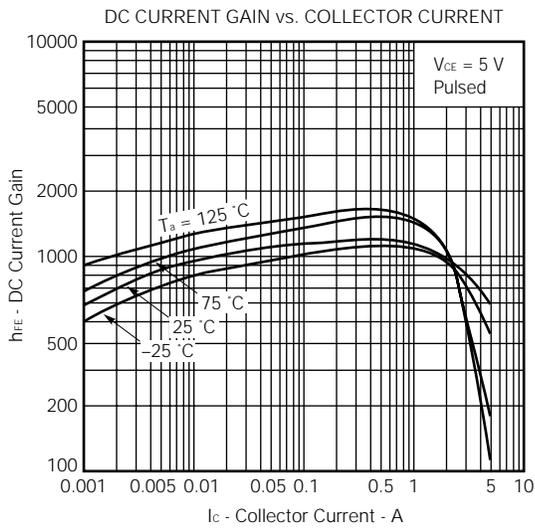
* PW ≤ 350 μs, Duty Cycle ≤ 2 % /pulsed

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

Standard: Computer, Office equipment, Communication equipment, Test and Measurement equipment, Machine tools, Industrial robots, Audio and Visual equipment, Other consumer products, etc.

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