

To our customers,

Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: <http://www.renesas.com>

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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Phase-out/Discontinued μ PA57C

NPN SILICON EPITAXIAL DARLINGTON TRANSISTOR ARRAY

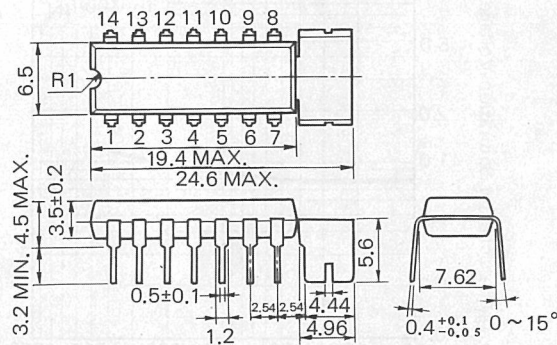
DESCRIPTION

The μ PA57C is a monolithic array of six darlington transistors.

This device is especially suited for driving LED, printer hummer, and other devices with up to 0.3 A output current per unit.

PACKAGE DIMENSIONS

in millimeters



FEATURES

- High DC Current Gain $h_{FE} \geq 1000$
- Package is 14 pin PLASTIC DIP. with TAB

ABSOLUTE MAXIMUM RATINGS

Maximum Voltages and Currents ($T_a = 25^\circ\text{C}$)

Collector to Base Voltage	V_{CBO}	40	V
Collector to Emitter Voltage	V_{CEO}	30	V
Continuous Collector Current	$I_C(\text{DC})$	0.4	A/unit
Peak Collector Current	I_C^*	2.0	A/package

Maximum Power Dissipation

Total Power Dissipation	P_d^*	1.5	W/package
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Maximum Temperature

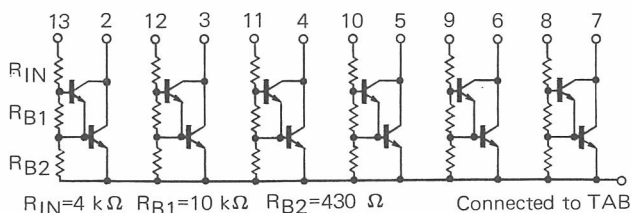
Operating Temperature	T_{opt}	-25 to $+75$	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40 to $+125$	$^\circ\text{C}$

* $PW=1.0$ ms, duty cycle $\leq 25\%$

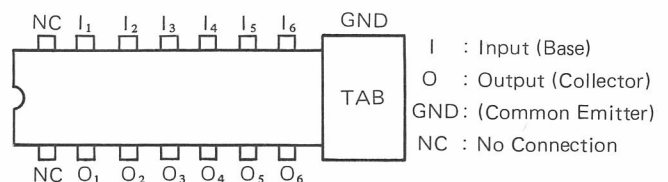
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

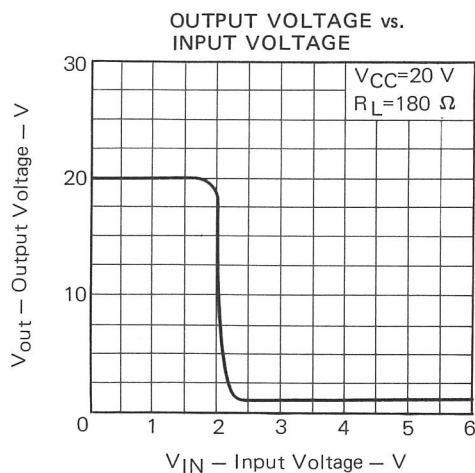
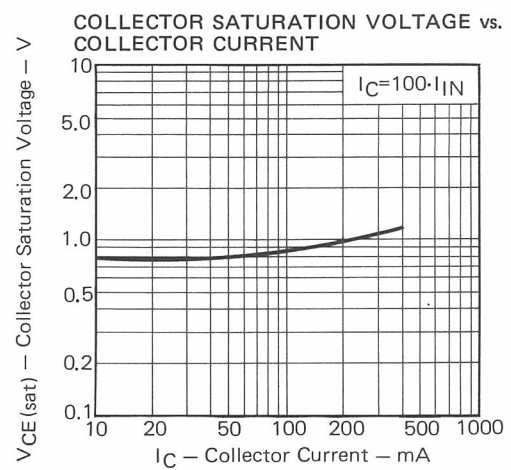
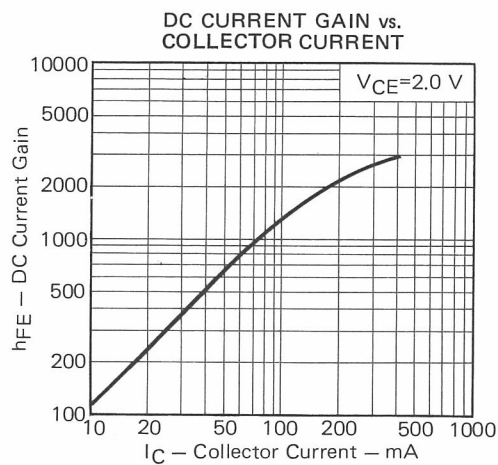
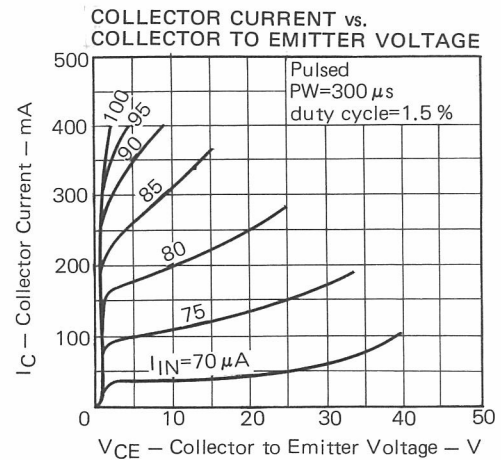
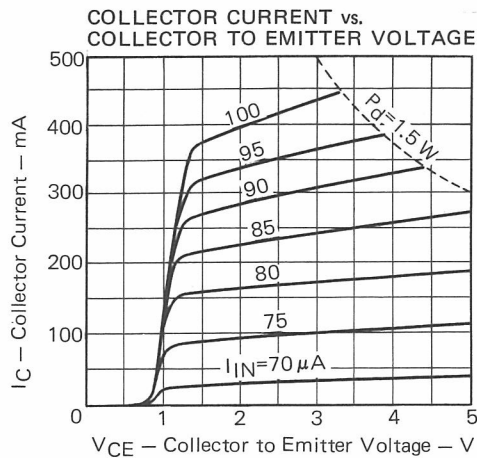
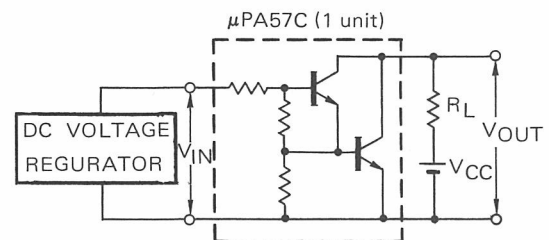
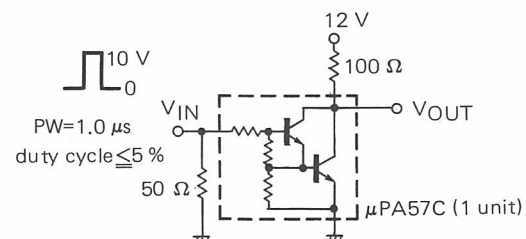
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Output Leakage Current	I_L		0.001	10	μA	$V_{CE}=20\text{ V}$, $V_{IN}=0$
DC Current Gain	h_{FE1}	500	900			$V_{CE}=2.0\text{ V}$, $I_C=100\text{ mA}$
DC Current Gain	h_{FE2}	1000	2800			$V_{CE}=2.0\text{ V}$, $I_C=400\text{ mA}$
Collector Saturation Voltage	$V_{CE(\text{sat})1}$		0.85	1.5	V	$V_{IN}=5.0\text{ V}$, $I_C=100\text{ mA}$
Collector Saturation Voltage	$V_{CE(\text{sat})2}$		1.3	2.0	V	$V_{IN}=10\text{ V}$, $I_C=400\text{ mA}$
Turn On Time	t_{on}		50		ns	See Switching Time Test Circuit
Storage Time	t_{stg}		150		ns	
Turn Off Time	t_{off}		200		ns	

EQUIVALENT CIRCUIT



CONNECTION DIAGRAM (Top View)



Phase-out/Discontinued**TYPICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)** **$V_{OUT}-V_{IN}$ TEST CIRCUIT****SWITCHING TIME TEST CIRCUIT**

Please note our new name,
NEC Corporation, starting April 1, 1983.

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