

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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PNP SILICON EPITAXIAL TRANSISTOR
FOR DRIVING FLUORESCENT INDICATOR PANEL

The 2SA675 is a resin sealed mold transistor and is ideal for dynamic drivers of counting indicator panel such as fluorescent indicator panel due to high voltage.

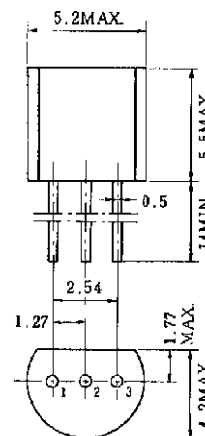
- High voltage
 $V_{CBO} > -80\text{ V}$, $V_{CER} > -80\text{ V}$
- Excellent linearity for current of DC current gain

ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	-80	V
Collector to emitter voltage	V_{CER}^*	-80	V
Emitter to base voltage	V_{EBO}	-5.0	V
Collector current	I_C	-100	mA
Total power dissipation	P_T	250	mW
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	-55 to +125	°C

* $R_{BE} = 30\text{ k}\Omega$

PACKAGE DRAWING (UNIT: mm)



Electrode Connection
 1. Emitter
 2. Collector
 3. Base
 EIAJ : SC-43
 JEDEC : TO-92
 IEC : PA33

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

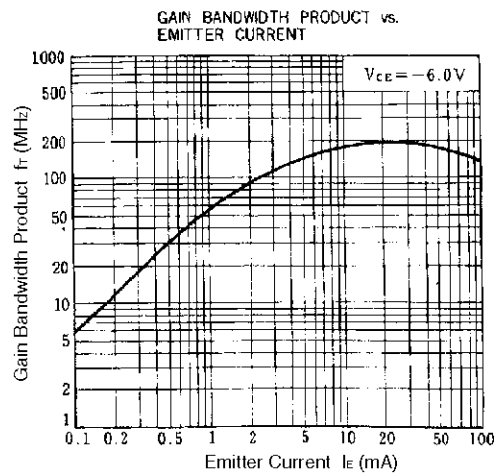
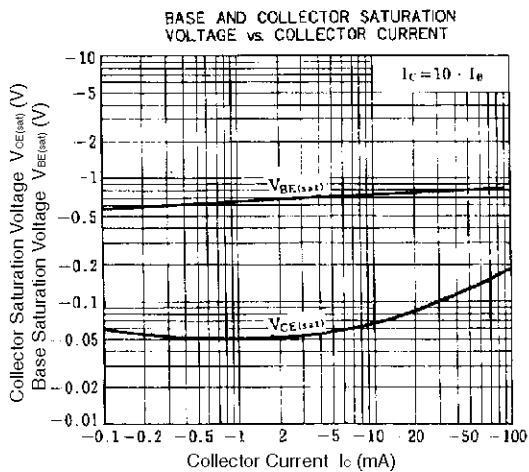
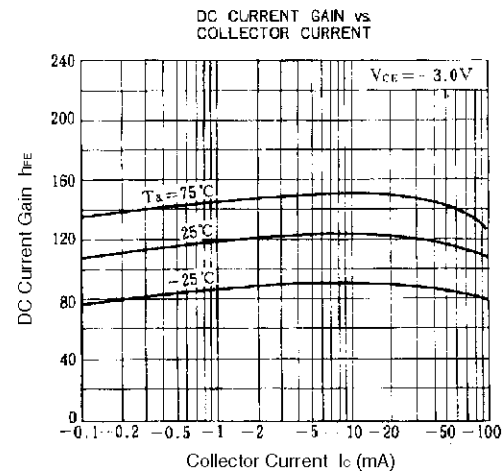
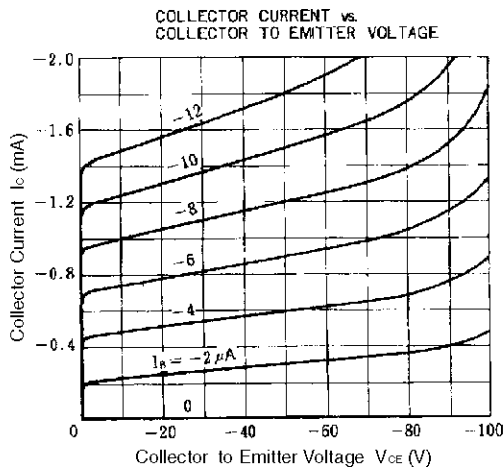
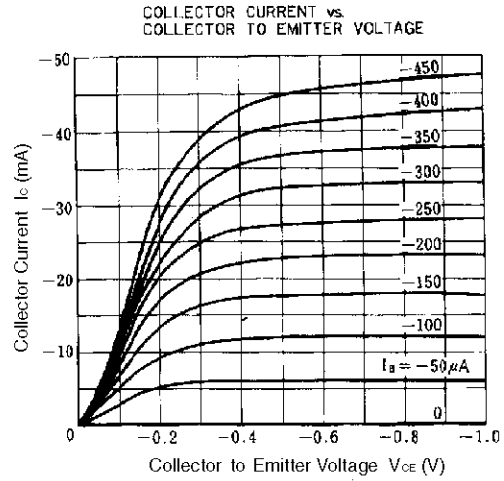
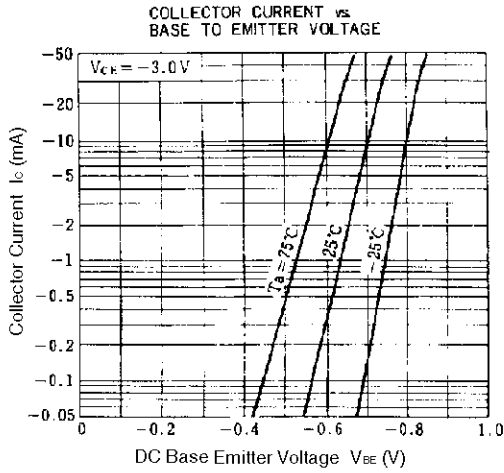
Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -60\text{ V}$, $I_E = 0$			-1.0	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = -3.0\text{ V}$, $I_C = 0$			-1.0	μA
DC current gain	h_{FE1}	$V_{CE} = -3.0\text{ V}$, $I_C = -1.0\text{ mA}$	60	120		
DC current gain	h_{FE2}	$V_{CE} = -3.0\text{ V}$, $I_C = -20\text{ mA}$	50	120	300	
Collector saturation voltage	$V_{CE(sat)}$	$I_C = -20\text{ mA}$, $I_B = -1.0\text{ mA}$		-0.10	-1.50	V
Base saturation voltage	$V_{BE(sat)}$	$I_C = -20\text{ mA}$, $I_B = -1.0\text{ mA}$		-0.74	-1.20	V
Gain bandwidth product	f_T	$V_{CE} = -6.0\text{ V}$, $I_E = 10\text{ mA}$	100	170		MHz
Output capacitance	C_{ob}	$V_{CB} = -10\text{ V}$, $I_E = 0$, $f = 1.0\text{ MHz}$		4.5	10	pF
Storage time	t_{stg}	Refer to the test circuit.		0.5	1.0	μs

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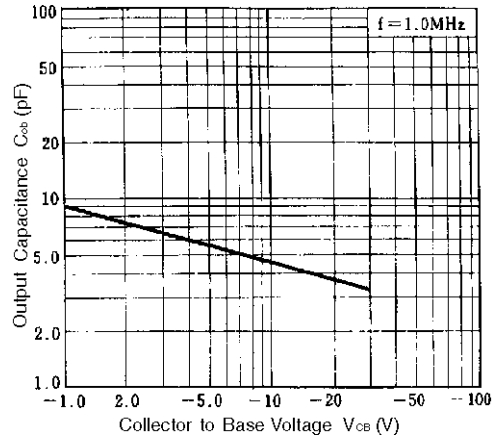
hFE CLASSIFICATION

Marking	L	K	U
hFE2	50 to 125	80 to 200	120 to 300

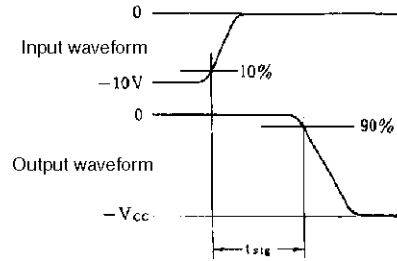
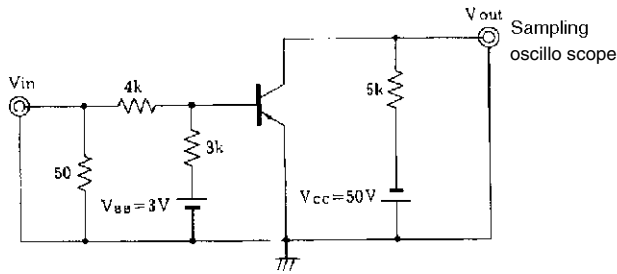
TYPICAL CHARACTERISTICS (Ta = 25°C)



OUTPUT CAPACITANCE vs. COLLECTOR TO BASE VOLTAGE



SWITCHING TIME TEST CIRCUIT



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