To our customers,

Old Company Name in Catalogs and Other Documents

On April 1st, 2010, NEC Electronics Corporation merged with Renesas Technology Corporation, and Renesas Electronics Corporation took over all the business of both companies. Therefore, although the old company name remains in this document, it is a valid Renesas Electronics document. We appreciate your understanding.

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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RENESAS

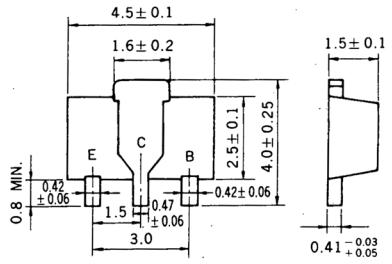
SILICON TRANSISTOR
2SC3554

NPN SILICON EPITAXIAL TRANSISTOR
POWER MINI MOLD

DESCRIPTION

2SC3554 is designed for high Voltage Switching application, especially in Hybrid Integrated Circuits.

PACAKAGE DIMENSIONS
in millimeters



E. Emitter
C. Collector
B. Base

FEATURES

- High Voltage : V_{CEO} = 300 V

ABSOLUTE MAXIMUM RATINGS (T_A = 25 °C)

Collector to Base Voltage	V_{CBO}	300	V
Collector to Emitter Voltage	V_{CEO}	300	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current (DC)	$I_{C(DC)}$	200	mA
Total Power Dissipation *	P_T	2.0	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	−55 to +150	°C

*When mounted on ceramic substrate of 16 cm² x 0.7 mm

ELECTRICAL CHARACTERISTICS (T_A = 25 °C)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	I_{CBO}			100	nA	V_{CB} = 200 V, I_E = 0
Emitter Cutoff Current	I_{EBO}			100	nA	V_{EB} = 5.0 V, I_C = 0
DC Current Gain	h_{FE} **	60	150	250		V_{CE} = 10 V, I_C = 10 mA
Collector Saturation Voltage	$V_{CE(sat)}$ **		0.15	1.5	V	I_C = 50 mA, I_B = 5.0 mA
Gain Bandwidth Product	f_T		50		MHz	V_{CE} = 30 V, I_E = −10 mA
Output Capacitance	C_{ob}		2.8	3.5	pF	V_{CB} = 30 V, I_E = 0, f = 1.0 MHz

**Pulsed: PW ≦ 350 μs, Duty Cycle ≦ 2 %

h_{FE} Classification

MARKING	SM	SL	SK
h_{FE}	60 to 120	100 to 200	160 to 250

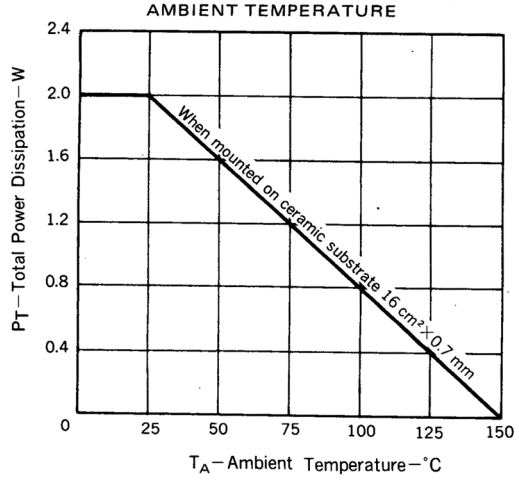
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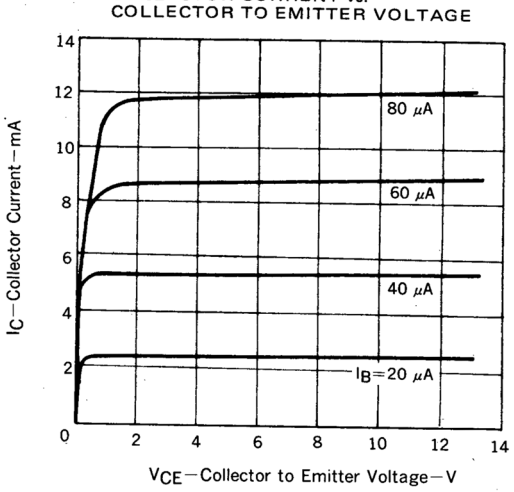
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TYPICAL CHARACTERISTICS (T_A = 25°C)

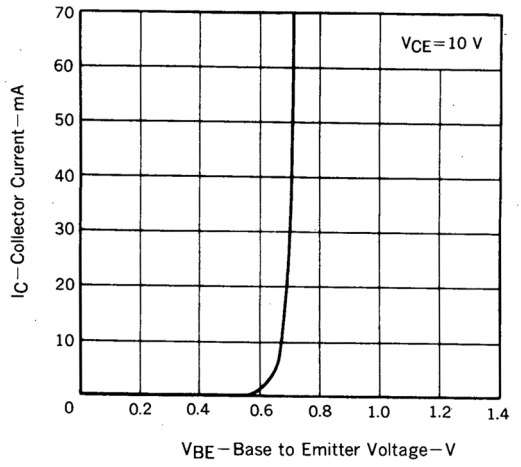
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



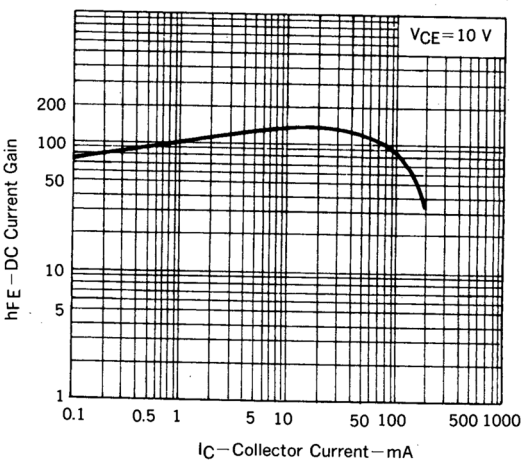
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



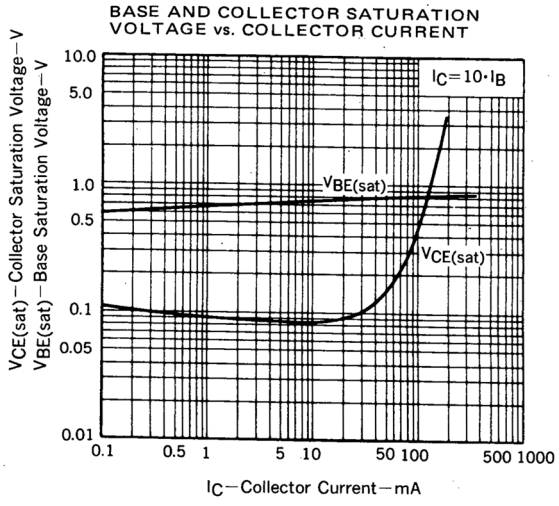
COLLECTOR CURRENT vs. BASE TO EMITTER VOLTAGE



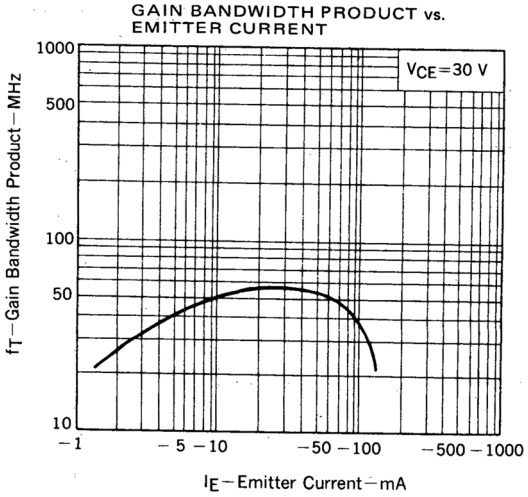
DC CURRENT GAIN vs. COLLECTOR CURRENT



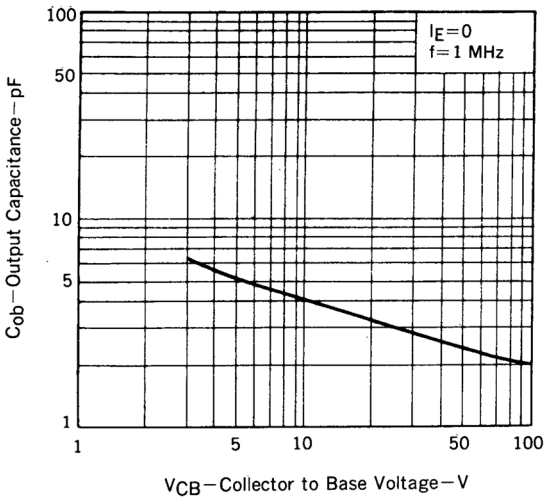
BASE AND COLLECTOR SATURATION VOLTAGE vs. COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT vs. EMITTER CURRENT



OUTPUT CAPACITANCE vs.
COLLECTOR TO BASE VOLTAGE



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