

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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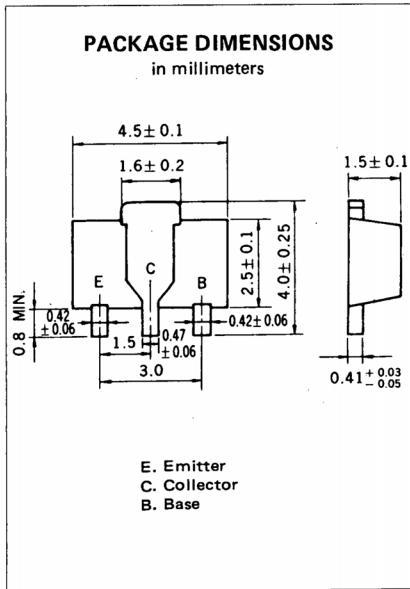
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HIGH SPEED SWITCHING
PNP SILICON EPITAXIAL TRANSISTOR
POWER MINI MOLD



DESCRIPTION The 2SA1463 is designed for power amplifier and high speed switching applications.

- FEATURES**
- High speed, high voltage switching.
 - Low Collector Saturation Voltage.
 - Complementary to the NEC 2SC3736 NPN transistor.

ABSOLUTE MAXIMUM RATINGS (T_A = 25 °C)

Collector to Base Voltage	V _{CBO}	-60	V
Collector to Emitter Voltage	V _{CEO}	-45	V
Emitter to Base Voltage	V _{EBO}	-5.0	V
Collector Current (DC)	I _{C(DC)}	-1.0	A
Collector Current (Pulse)*	I _{C(Pulse)}	-2.0	A
Total Power Dissipation **	P _T	2.0	W
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

* PW ≤ 10 ms, Duty Cycle ≤ 50 %

** 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 CONDICTIONS
Collector Cutoff Current	I _{CES}			-0.5	μA	V _{CE} = -45 V, R _{BE} = 0
Emitter Cutoff Current	I _{EBO}			-0.5	μA	V _{EB} = -4.0 V, I _C = 0
DC Current Gain	h _{FE1} ***	60		200		V _{CE} = -10 V, I _C = -50 mA
DC Current Gain	h _{FE2} ***	60				V _{CE} = -10 V, I _C = -500 mA
Collector Saturation Voltage	V _{CE(sat)} ***		-0.26	-0.6	V	I _C = -500 mA, I _B = -50 mA
Base Saturation Voltage	V _{BE(sat)} ***		-0.98	-1.2	V	
Gain Bandwidth Product	f _T	300	400		MHz	V _{CE} = -10 V, I _E = 100 mA
Output Capacitance	C _{ob}		11	25	pF	V _{CB} = -10 V, I _E = 0, f = 1.0 MHz
Turn-on Time	t _{on}		25	40	ns	I _C = -500 mA I _{B1} = -I _{B2} = -50 mA
Storage Time	t _{stg}		46	70	ns	
Turn-off Time	t _{off}		62	100	ns	

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

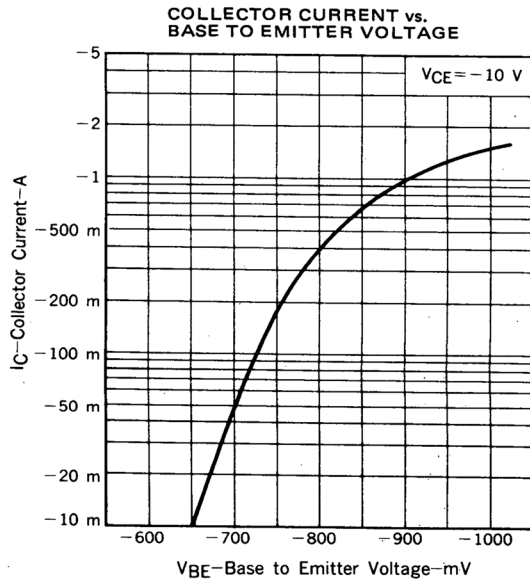
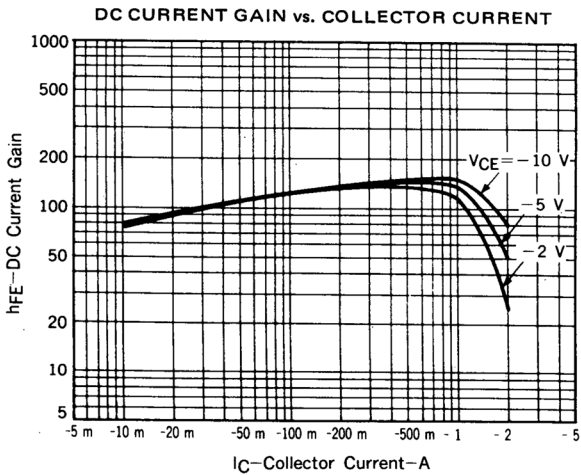
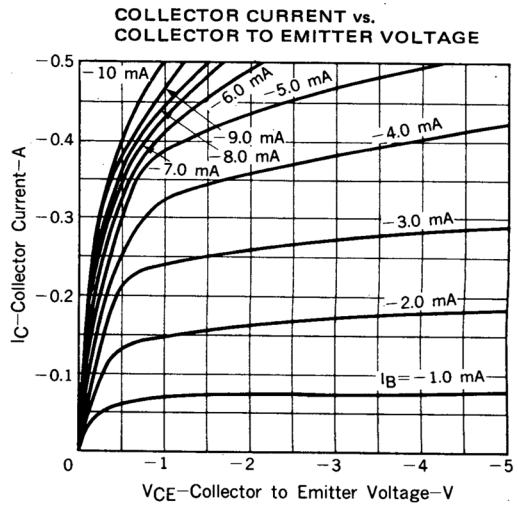
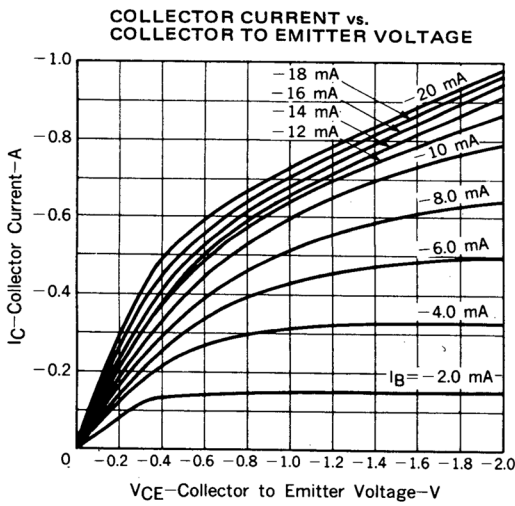
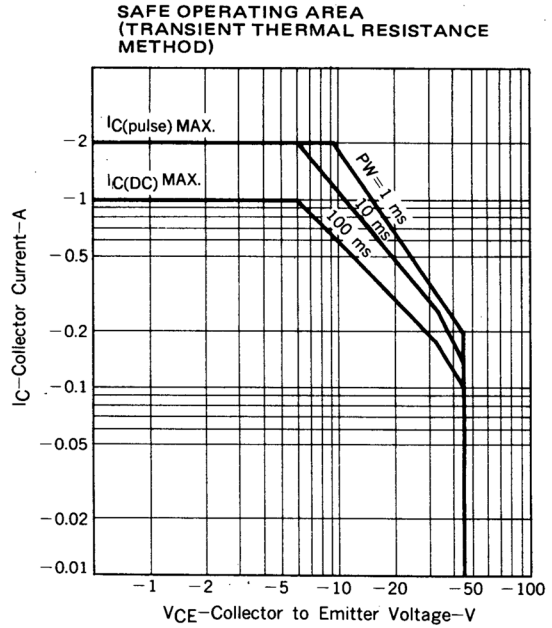
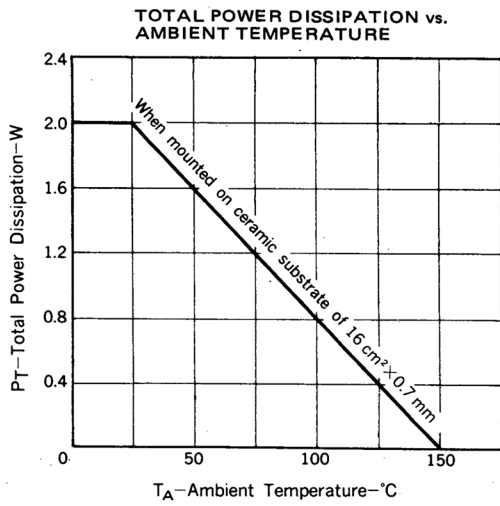
h_{FE} Classification

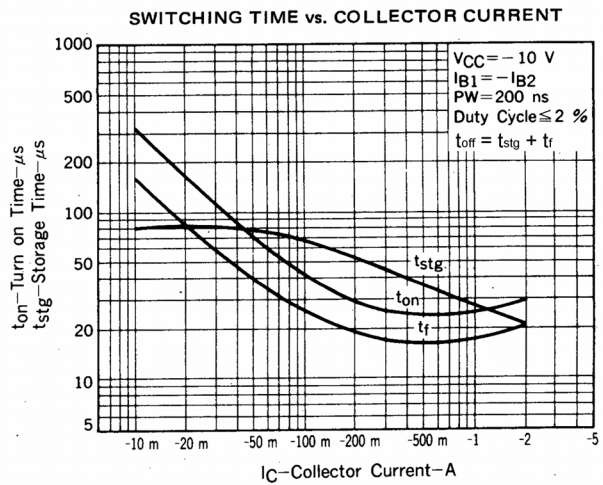
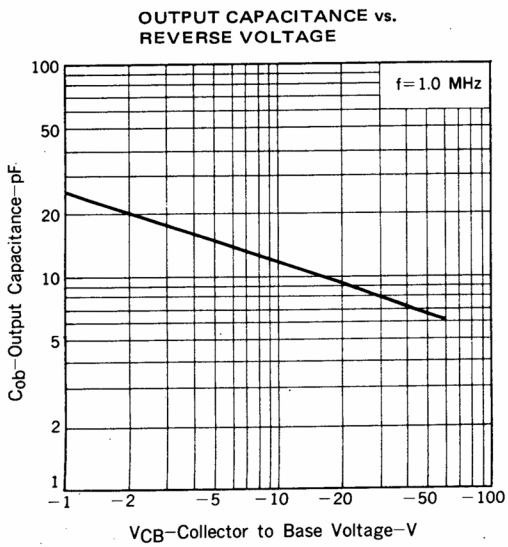
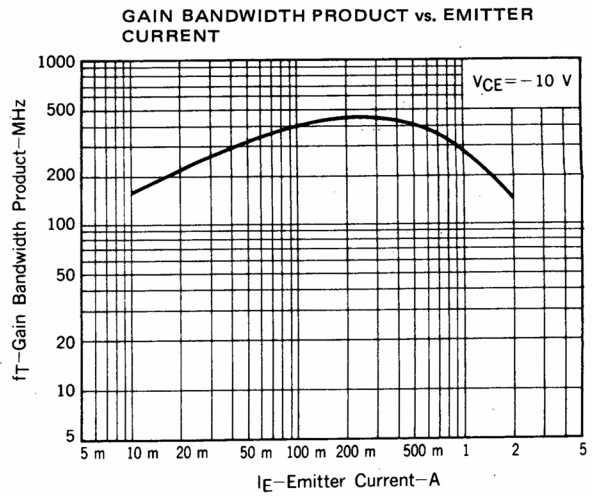
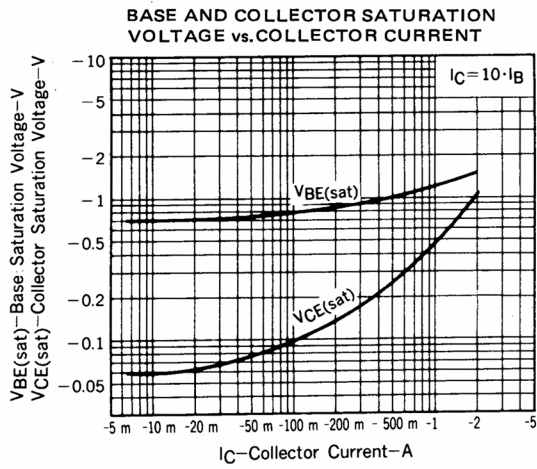
MARKING	IL	IK
h _{FE1}	60 to 120	100 to 200

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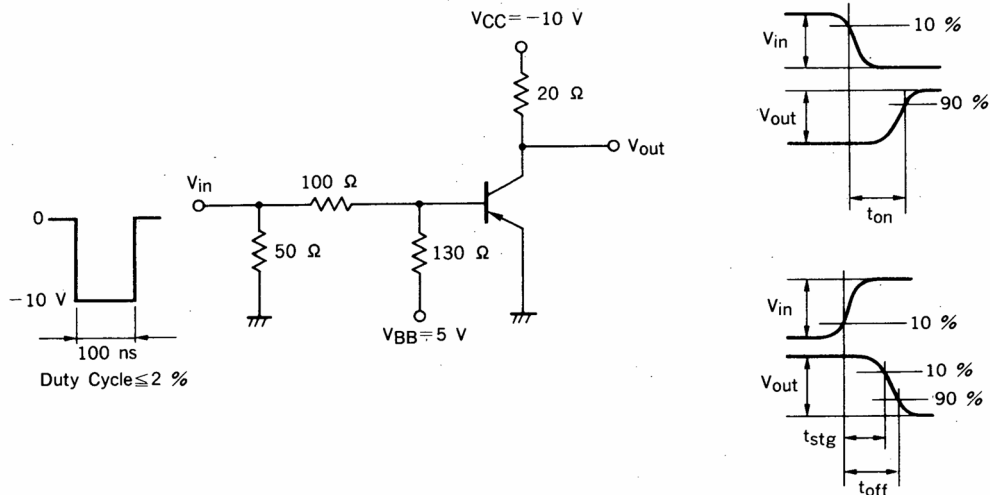
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TYPICAL CHARACTERISTICS (T_A = 25°C)





SWITCHING TIME TEST CIRCUIT



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