



2SD1664

NPN SILICON TRANSISTOR

MEDIUM POWER NPN TRANSISTOR

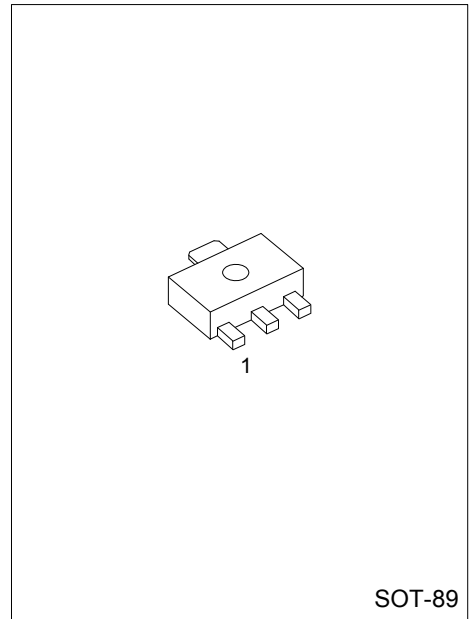
DESCRIPTION

The UTC **2SD1664** is an epitaxial planar type NPN silicon transistor.

FEATURES

*Low $V_{CE(SAT)}$: $V_{CE(SAT)} = 0.15V(Typ.)$
($I_C/I_B = 500mA/50mA$)

* Complement the 2SB1132.



SOT-89

Lead-free: 2SD1664L
Halogen-free: 2SD1664G

ORDERING INFORMATION

Ordering Number			Package	Pin Assignment			Packing
Normal	Lead Free Plating	Halogen Free		1	2	3	
2SD1664-x-AB3-R	2SD1664L-x-AB3-R	2SD1664G-x-AB3-R	SOT-89	B	C	E	Tape Reel

<p>2SD1664L-x-AB3-R</p> <p>(1) Packing Type (2) Package Type (3) Rank (4) Lead Plating</p>	<p>(1) R: Tape Reel (2) AB3: SOT-89 (3) x: refer to Classification of h_{FE} (4) G: Halogen Free, L: Lead Free Plating, Blank: Pb/Sn</p>
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■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	32	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	1	A
Collector Current (Duty=1/2, PW=20ms)		2	A
Collector Power Dissipation	P_C	0.5	W
Junction Temperature	T_J	+150	°C
Storage Temperature	T_{STG}	-55 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

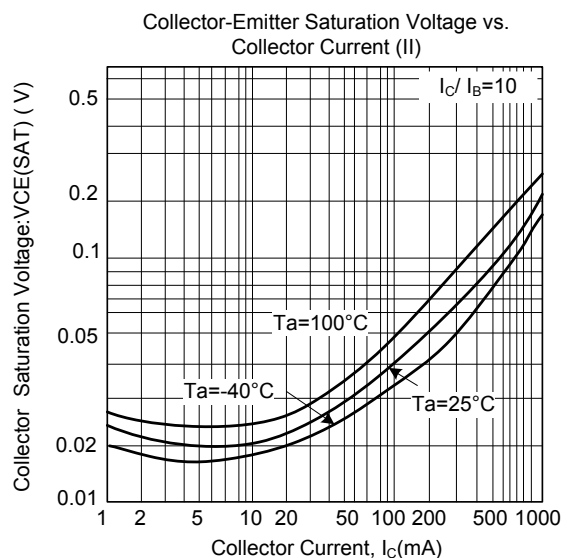
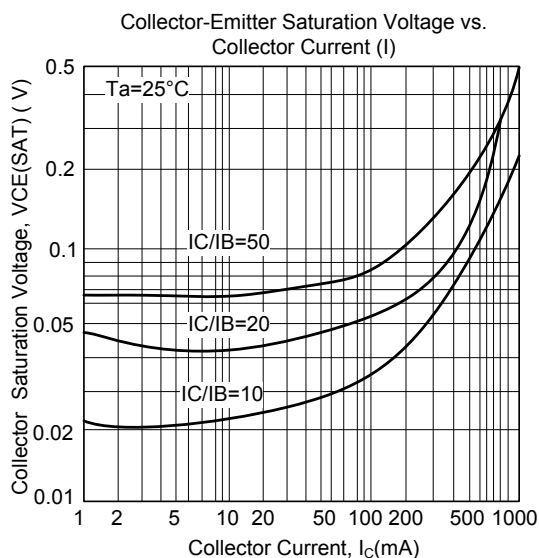
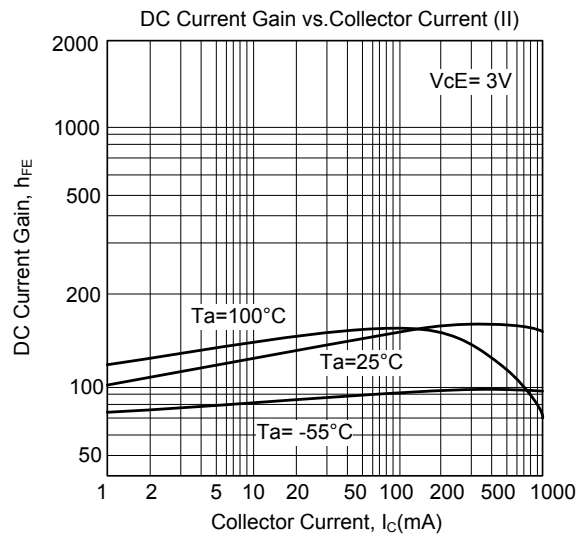
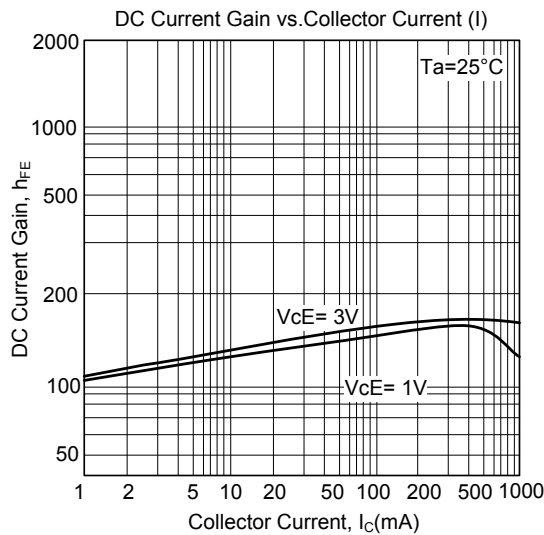
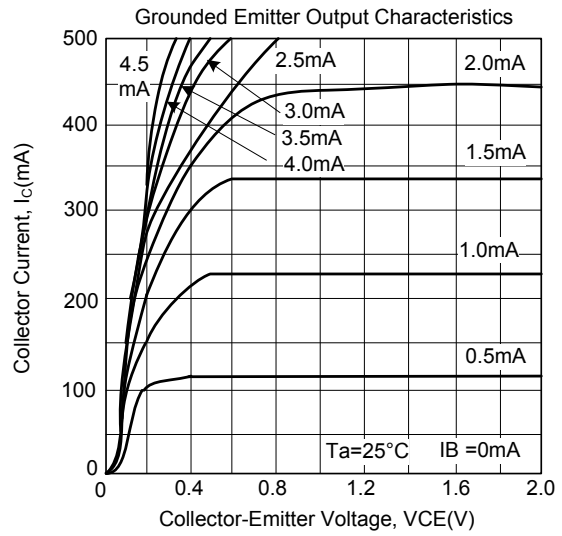
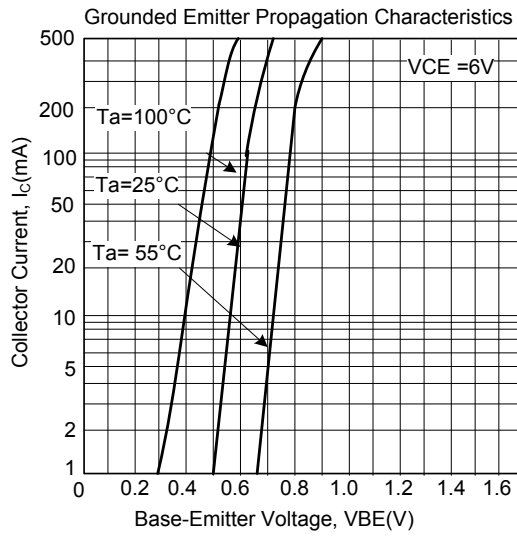
■ ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Base Breakdown Voltage	BV_{CBO}	$I_C = 50\mu A$	40			V
Collector Emitter Breakdown Voltage	BV_{CEO}	$I_C = 1mA$	32			V
Emitter Base Breakdown Voltage	BV_{EBO}	$I_E = 50\mu A$	5			V
Collector Cut-Off Current	I_{CBO}	$V_{CB} = 20V$			0.5	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = 4V$			0.5	μA
DC Current Gain	h_{FE}	$V_{CE} = 3V, I_C = 100mA$	82		390	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C/I_B = 500mA / 50mA$		0.15	0.4	V
Transition Frequency	f_T	$V_{CE} = 5V, I_E = -50mA, f = 100MHz$		150		MHz
Output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0A, f = 1MHz$		15		pF

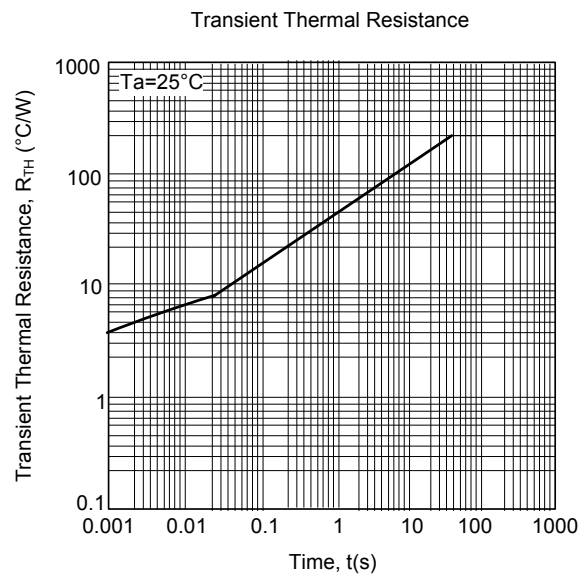
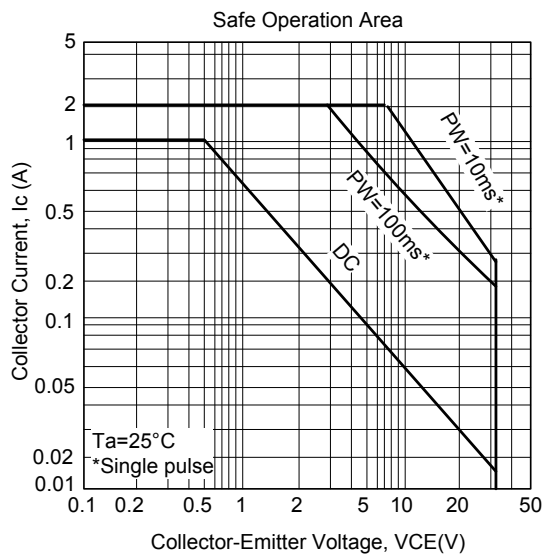
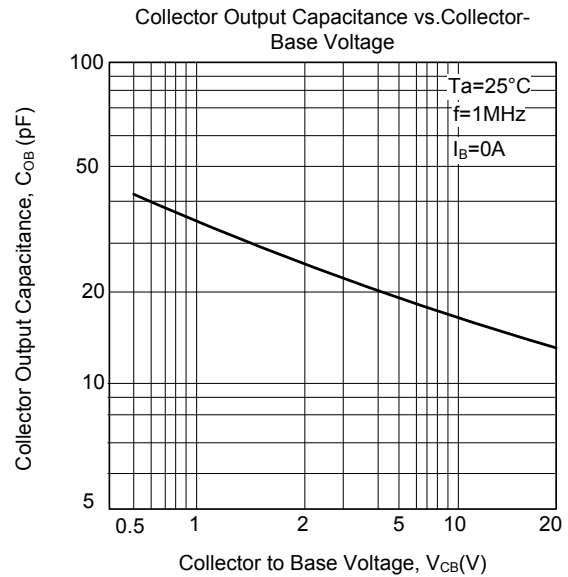
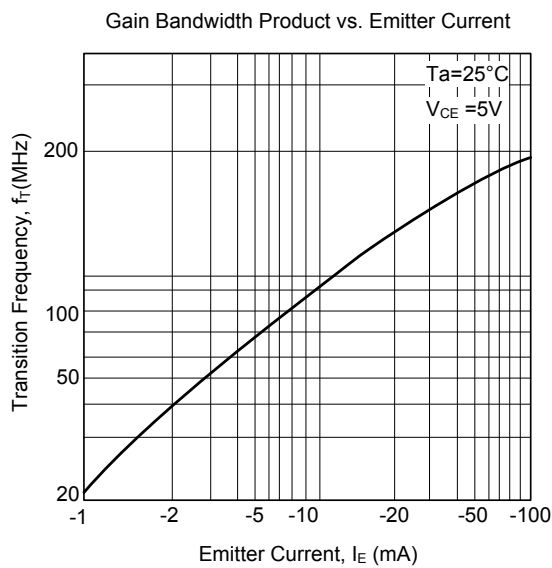
■ CLASSIFICATION OF h_{FE}

RANK	P	Q	R
RANGE	82-180	120-270	180-390

TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



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