

# UTC 2SA1300 PNP EPITAXIAL SILICON TRANSISTOR

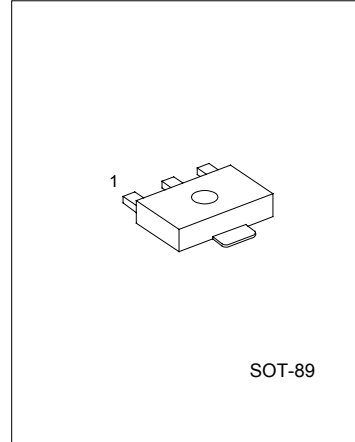
SILICON PNP EPITAXIAL TYPE

## DESCRIPTION

- \*Strobo Flash Applications.
- \*Medium Power Amplifier Applications.

## FEATURES

- \*High DC Current Gain and Excellent hFE Linearity.
- \*hFE(1)=140-600, (V<sub>CE</sub>= -1V, I<sub>C</sub>= -0.5A)
- \*hFE(2)=60(Min.), 120(Typ.), (V<sub>CE</sub>= -1V, I<sub>C</sub>= -4A)
- \*Low Saturation Voltage
- \*V<sub>CE(sat)</sub>= -0.5V(Max.), (I<sub>C</sub>= -2A, I<sub>E</sub>= -50mA)



1: Emitter 2: Collector 3:Base

## ABSOLUTE MAXIMUM RATINGS (TA=25°C)

PARAMETER		SYMBOL	RATIOS	UNIT
Collector-Base Voltage		V <sub>CB0</sub>	-20	V
Collector-Emitter Voltage		V <sub>CES</sub>	-20	V
		V <sub>CEO</sub>	-10	
Emitter-Base Voltage		V <sub>EBO</sub>	-6	V
Collector Current	DC	I <sub>C</sub>	-2	A
	Pulsed (Note)	I <sub>CP</sub>	-5	
Base Current		I <sub>B</sub>	-2	A
Collector Power Dissipation		P <sub>C</sub>	750	mW
Junction Temperature		T <sub>j</sub>	150	°C
Storage Temperature Range		T <sub>stg</sub>	-55~150	°C

Note :Pulse Width= 10ms(Max.),Duty Cycle=30%(Max.)

## ELECTRICAL CHARACTERISTICS (TA=25°C)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =0	-10	-	-	V
Emitter-collector breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = -1mA, I <sub>C</sub> =0	-6	-	-	V
Collector cut-off current	I <sub>CB0</sub>	V <sub>CE</sub> = -20V, I <sub>E</sub> =0	-	-	-100	nA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>BE</sub> = -6V, I <sub>C</sub> =0	-	-	-100	nA
DC current Gain	hFE1	V <sub>CE</sub> = -1V, I <sub>C</sub> =0.5A	140	-	600	
	hFE2	V <sub>CE</sub> = -1V, I <sub>C</sub> = -4A	60	120	-	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = -2A, I <sub>B</sub> = -50mA	-	-0.2	-0.5	V
Base-emitter voltage	V <sub>BE</sub>	V <sub>CE</sub> = -1V, I <sub>C</sub> = -2A	-	-0.83	-1.5	V
Current gain bandwidth product	f <sub>T</sub>	V <sub>CE</sub> = -1V, I <sub>C</sub> = -0.5A	-	140	-	MHz
Output capacitance	C <sub>ob</sub>	V <sub>CE</sub> = -10V, I <sub>E</sub> =0, f=1MHz	-	50	-	pF

## CLASSIFICATIONS OF h<sub>FE1</sub>

RANK	Y	GR	BL

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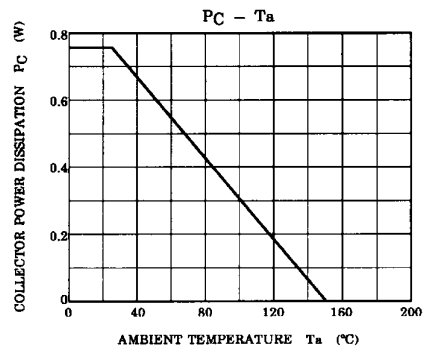
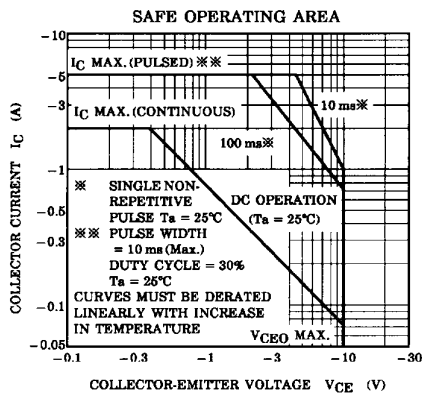
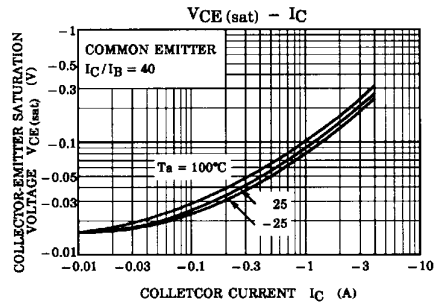
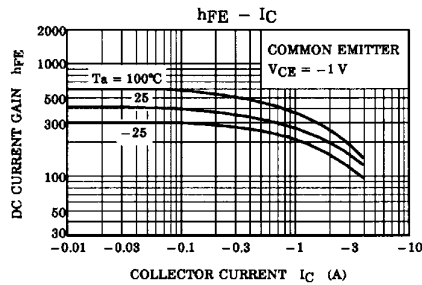
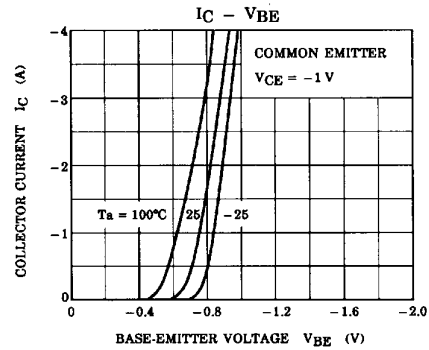
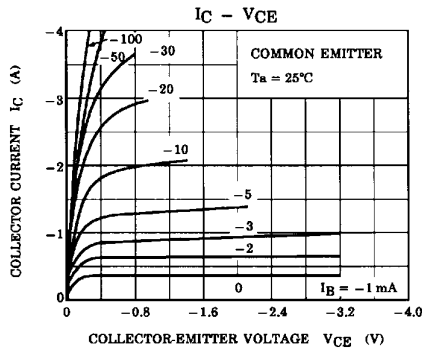
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# UTC 2SA1300 PNP EPITAXIAL SILICON TRANSISTOR

RANGE	140-280	200-400	300-600
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## CHARACTERISTICS CURVE



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## UTC 2SA1300 PNP EPITAXIAL SILICON TRANSISTOR

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