

UTC 2SA1300 PNP EPITAXIAL SILICON TRANSISTOR

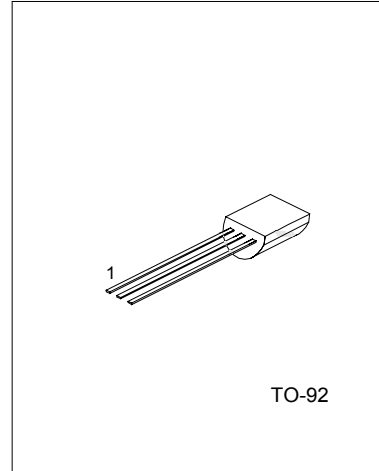
SILICON PNP EPITAXIAL TYPE

DESCRIPTION

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

FEATURES

- *High DC Current Gain and Excellent hFE Linearity.
- *hFE(1)=140-600, ($V_{CE} = -1V, I_C = -0.5A$)
- *hFE(2)=60(Min.), 120(Typ.), ($V_{CE} = -1V, I_C = -4A$)
- *Low Saturation Voltage
- * $V_{CE(sat)} = -0.5V(\text{Max.}), (I_C = -2A, I_E = -50mA)$



1: Emitter 2: Collector 3:Base

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$)

PARAMETER		SYMBOL	RATIOS	UNIT
Collector-Base Voltage		V_{CB0}	-20	V
Collector-Emitter Voltage		V_{CES}	-20	V
		V_{CEO}	-10	
Emitter-Base Voltage		V_{EB0}	-6	V
Collector Current	DC	I_C	-2	A
	Pulsed (Note)	I_{CP}	-5	
Base Current		I_B	-2	A
Collector Power Dissipation		P_C	750	mW
Junction Temperature		T_J	150	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	-55~150	$^\circ\text{C}$

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

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10mA, I_B = 0$	-10	-	-	V
Emitter-collector breakdown voltage	$V_{(BR)EBO}$	$I_E = -1mA, I_C = 0$	-6	-	-	V
Collector cut-off current	I_{CBO}	$V_{CE} = -20V, I_E = 0$	-	-	-100	nA
Emitter cut-off current	I_{EBO}	$V_{BE} = -6V, I_C = 0$	-	-	-100	nA
DC current Gain	hFE1	$V_{CE} = -1V, I_C = 0.5A$	140	-	600	
	hFE2	$V_{CE} = -1V, I_C = -4A$	60	120	-	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -2A, I_B = -50mA$	-	-0.2	-0.5	V
Base-emitter voltage	V_{BE}	$V_{CE} = -1V, I_C = -2A$	-	-0.83	-1.5	V
Current gain bandwidth product	fr	$V_{CE} = -1V, I_C = -0.5A$	-	140	-	MHz
Output capacitance	Cob	$V_{CE} = -10V, I_E = 0, f = 1MHz$	-	50	-	pF

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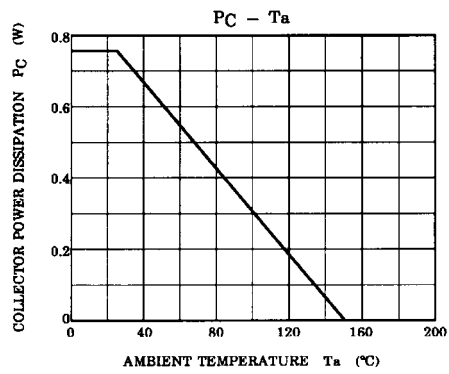
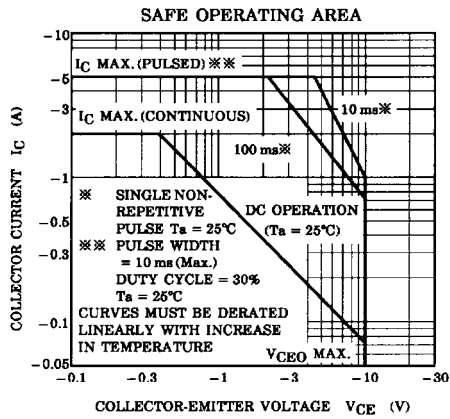
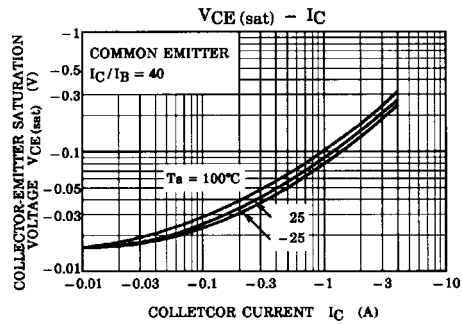
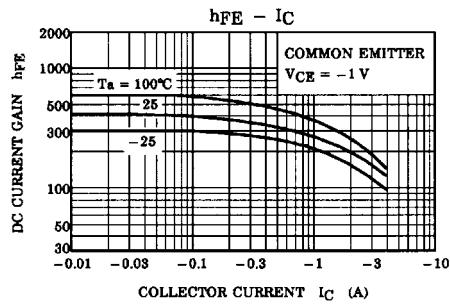
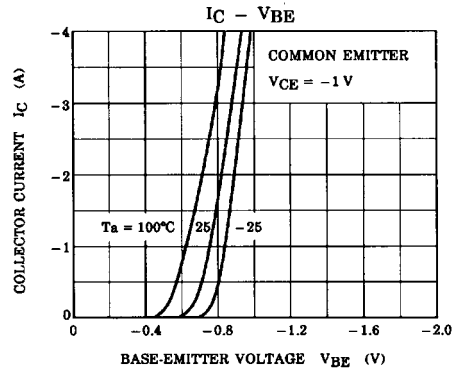
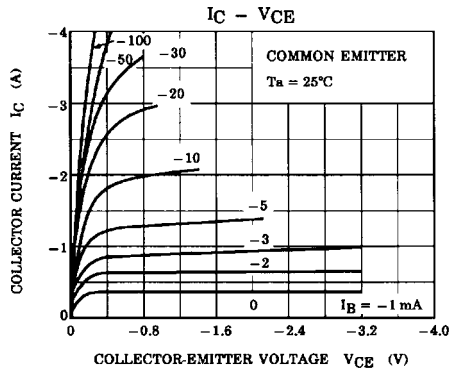
CLASSIFICATIONS OF h_{FE1}

RANK	Y	GR	BL
RANGE	140-280	200-400	300-600

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CHARACTERISTICS CURVE



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