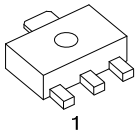
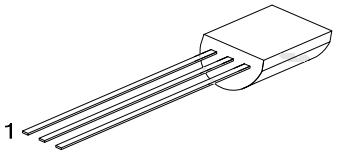
2SA1300

PNP EPITAXIAL SILICON TRANSISTOR

SILICON PNP EPITAXAL TYPE



SOT-89



TO-92

■ DESCRIPTION

* Strobo Flash Applications.
* Medium Power Amplifier Applications.

■ FEATURES

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

■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
-	2SA1300G-xx-AB3-R	SOT-89	B	C	E	Tape Reel
2SA1300L-xx-T92-B	2SA1300G-xx-T92-B	TO-92	E	C	B	Tape Box
2SA1300L-xx-T92-K	2SA1300G-xx-T92-K	TO-92	E	C	B	Bulk

Note: Pin Assignment: E: Emitter C: Collector B: Base

2SA1300G-xx-AB3-R (1) Packing Type (2) Package Type (3) Rank (4) Green Package	(1) R: Tape Reel, B: Tape Box, K: Bulk (2) AB3: SOT-89, T92: TO-92 (3) xx: Refer to Classification of h_{FE1} (4) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING

SOT-89	TO-92
□□□□ 2SA1300G Data Code 1	UTC A 1 3 0 0 □ □□ □□□ L: Lead Free G: Halogen Free Rank Data Code 1

2SA1300

PNP EPITAXIAL SILICON TRANSISTOR

■ ABSOLUTE MAXIMUM RATING (T_A=25°C, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V_{CBO}	-20	V
Collector-Emitter Voltage		V_{CES}	-20	V
		V_{CEO}	-10	
Emitter-Base Voltage		V_{EBO}	-6	V
Collector Current	DC	I_C	-2	A
	Pulsed (Note 2)	I_{CP}	-5	
Base Current		I_B	-2	A
Collector Power Dissipation		P_C	750	mW
Junction Temperature		T_J	150	°C
Storage Temperature		T_{STG}	-40 ~ +150	°C

Notes: 1. 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.
2. Pulse Width= 10ms(Max.), Duty Cycle=30%(Max.)

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

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	h_{FE1}	V_{CE}= -1V, I_C=0.5A	140		600	
	h_{FE2}	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	f_T	V_{CE}= -1V,I_C= -0.5A		140		MHz
Output capacitance	C_{OB}	V_{CE}= -10V, I_E=0, f=1MHz		50		pF

■ CLASSIFICATIONS OF h_{FE1}

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