



2SA1300

PNP EPITAXIAL SILICON TRANSISTOR

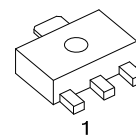
SILICON PNP EPITAXIAL TYPE

DESCRIPTION

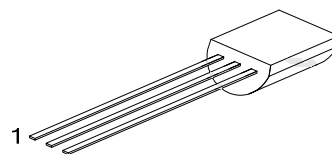
- * Strobe Flash Applications.
- * Medium Power Amplifier Applications.

FEATURES

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



SOT-89



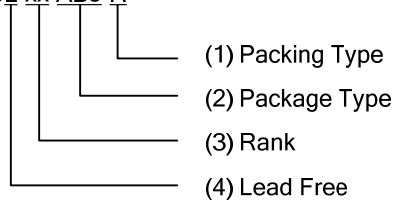
TO-92

ORDERING INFORMATION

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

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

2SA1300L-xx-AB3-R



- (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, L: Lead Free

■ ABSOLUTE MAXIMUM RATING (T_A=25°C)

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 1)	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

Note 1. Pulse Width= 10ms(Max.), Duty Cycle=30%(Max.)

2. 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.
3. The device is guaranteed to meet performance specification within 0°C~70°C operating temperature range and assured by design from -20°C~85°C.

■ ELECTRICAL CHARACTERISTICS (T_A=25°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	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

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