2SA1013

PNP EPITAXIAL SILICON TRANSISTOR

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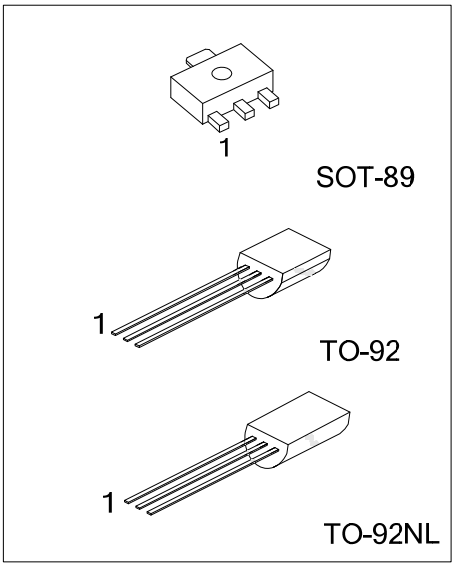

■ DESCRIPTION

The UTC **2SA1013** is a PNP epitaxial silicon transistor, it uses UTC's advanced technology to provide the customers with high BV_{CEO} and high DC current gain, etc.

The UTC **2SA1013** is suitable for power switching and color TV vertical deflection output, etc.

■ FEATURES

* High BV_{CEO}
* High DC current gain
* Large continuous collector current capability

■ ORDERING INFORMATION

Ordering Number		Package	Pin assignment			Packing
Lead Free	Halogen Free		1	2	3	
-	2SA1013G-x-AB3-R	SOT-89	B	C	E	Tape Reel
2SA1013L-x-T92-B	2SA1013G-x-T92-B	TO-92	E	C	B	Tape Box
2SA1013L-x-T92-K	2SA1013G-x-T92-K	TO-92	E	C	B	Bulk
2SA1013L-x-T9N-B	2SA1013G-x-T9N-B	TO-92NL	E	C	B	Tape Box
2SA1013L-x-T9N-K	2SA1013G-x-T9N-K	TO-92NL	E	C	B	Bulk

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

2SA1013L-x-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, T9N: TO-92NL (3) refer to Classification of h_{FE} (4) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING

SOT-89	TO-92	TO-92NL
□□□□ 2SA1013G → Data Code 1	UTC 2SA1013□ → L: Lead Free, G: Halogen Free □□□ → Data Code 1	L: Lead Free G: Halogen Free Data Code UTC 2SA1013□ □□□□ 1

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

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V_{CBO}	-160	V
Collector-Emitter Voltage		V_{CEO}	-160	V
Emitter-Base Voltage		V_{EBO}	-6	V
Collector Current		I_C	-1	A
Base Current		I_B	-0.5	A
Collector Power Dissipation	SOT-89	P_C	500	W
	TO-92/TO-92NL		900	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 (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-Off Current	I_{CBO}	V_{CB}=-150V, I_E=0			-1.0	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=-6V, I_C=0			-1.0	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=-10mA, I_B=0	-160			V
DC Current Gain	h_{FE}	V_{CE}=-5V, I_C=-200mA	60		320	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=-500mA, I_B=-50mA			-1.5	V
Base-Emitter Voltage	V_{BE}	V_{CE}=-5V, I_C=-5mA	-0.45		-0.75	V
Transition Frequency	f_T	V_{CE}=-5V, I_C=-200mA	15	50		MHz
Collector Output Capacitance	C_{ob}	V_{CB}=-10V, f=1MHz, I_E=0			35	pF

■ CLASSIFICATION OF h_{FE}

RANK	R	O	P
RANGE	60~120	100~200	160~320

■ TYPICAL CHARACTERISTICS