



USS305PX

Preliminary

PNP SILICON TRANSISTOR

-4.0A, -80V PNP LOW $V_{CE(SAT)}$ TRANSISTOR

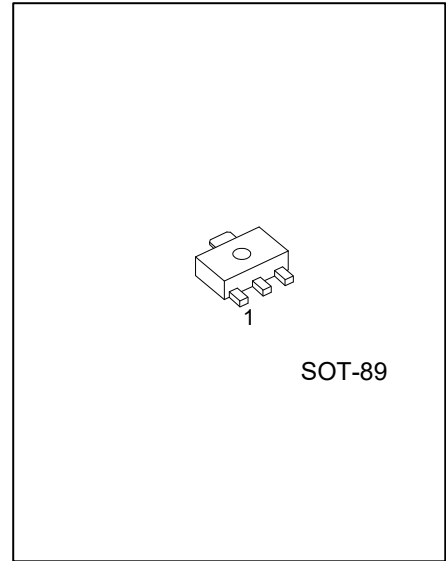
DESCRIPTION

The UTC **USS305PX** is PNP low $V_{CE(SAT)}$ transistor in a medium power and flat lead SOT-89 Surface-Mounted Device (SMD) plastic package.

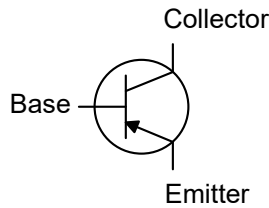
NPN complement: USS305NX.

FEATURES

- * Very low collector-emitter saturation voltage $V_{CE(SAT)}$
- * High collector current capability I_C and I_{CM}
- * High collector current gain (h_{FE}) at high I_C
- * High energy efficiency due to less heat generation



EQUIVALENT CIRCUIT



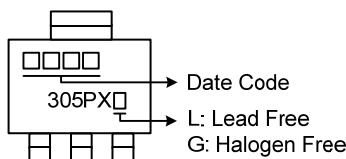
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
USS305PXL-AB3-R	USS305PXG-AB3-R	SOT-89	B	E	C	Tube

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

USS305PXG-AB3-R	(1)Packing Type	(1) R: Tape Reel
	(2)Package Type	(2) AB3: SOT-89
	(3)Green Package	(3) G: Halogen Free and Lead Free, L: Lead Free

MARKING



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

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V _{CB0}	-80	V
Collector-Emitter Voltage	V _{CEO}	-80	V
Emitter-Base Voltage	V _{EBO}	-5	V
Collector Current	I _C	-4	A
Peak Collector Current	I _{CM}	-8	A
Power Dissipation	P _C	600	mW
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.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ _{JA}	208	°C/W

Note: Device mounted on FR-4 substrate PC board, 2oz copper, with 1inch square copper plate.

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV _{CB0}	I _C =-100μA, I _E =0	-80			V
Collector-Emitter Breakdown Voltage	BV _{CEO}	I _C =-1mA, I _B =0	-80			V
Emitter-Base Breakdown Voltage	BV _{EBO}	I _E =-100μA, I _C =0	-5			V
Collector-Base Cut-off Current	I _{CB0}	V _{CB} =-80V, I _E =0			-100	nA
Emitter-Base Cut-off Current	I _{EBO}	V _{EB} =-5V, I _C =0			-100	nA
Base-Emitter Saturation Voltage	V _{BE(SAT)}	I _C =-1A, I _B =-100mA			-0.9	V
		I _C =-4A, I _B =-400mA			-1.05	V
Base-Emitter Turn-On Voltage	V _{BE(ON)}	V _{CE} =-2V, I _C =-2A			-0.85	V
DC Current Gain	h _{FE}	V _{CE} =-2V, I _C =-500mA	200			
		V _{CE} =-2V, I _C =-1A	150			
		V _{CE} =-2V, I _C =-2A	120			
		V _{CE} =-2V, I _C =-4A	60			
		V _{CE} =-2V, I _C =-5A	45			
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	I _C =-500mA, I _B =-50mA			-50	mV
		I _C =-1A, I _B =-50mA			-100	mV
		I _C =-1A, I _B =-10mA			-250	mV
		I _C =-2A, I _B =-40mA			-280	mV
		I _C =-4A, I _B =-200mA			-330	mV
		I _C =-4A, I _B =-400mA			-240	mV
		I _C =-4.7A, I _B =-235mA			-420	mV

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