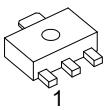
USS4350X **Preliminary** ***NPN SILICON TRANSISTOR***

3.0A, 50V NPN LOW $V_{CE(SAT)}$ TRANSISTOR



SOT-89

■ DESCRIPTION

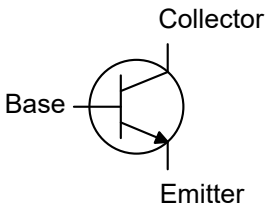
The UTC **USS4350X** is NPN low $V_{CE(SAT)}$ transistor in a medium power and flat lead SOT-89 Surface-Mounted Device (SMD) plastic package.

PNP complement: USS5350X.

■ 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 IC
* High energy efficiency due to less heat generation

■ EQUIVALENT CIRCUIT



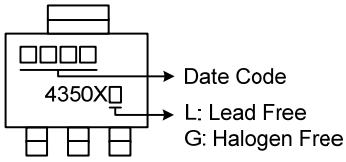
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
USS4350XL-AB3-R	USS4350XG-AB3-R	SOT-89	B	C	E	Tape Reel

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

USS4350XG-AB3-R (1)Packing Type (2)Package Type (3)Green Package	(1) R: Tape Reel (2) AB3: SOT-89 (3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



Copyright © 2026 Unisonic Technologies Co., Ltd

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

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	50	V
Collector Current	I_C	3	A
Peak Collector Current	I_{CM}	5	A
Base Current	I_B	0.5	A
Power Dissipation	P_C	550	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}	225	°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_{CBO}	I_C=100μA, I_E=0	50			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=1mA, I_B=0	50			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=100μA, I_C=0	5			V
Collector-Base Cut-off Current	I_{CBO}	V_{CB}=50V, I_E=0			100	nA
Collector-Emitter Cut-off Current	I_{CEO}	V_{CE}=50V, I_B=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=2A, I_B=100mA			1.1	V
		I_C=3A, I_B=300mA			1.2	V
Base-Emitter Turn-On Voltage	$V_{BE(ON)}$	V_{CE}=2V, I_C=1A			1.2	V
DC Current Gain	h_{FE}	V_{CE}=2V, I_C=100mA	300			
		V_{CE}=2V, I_C=500mA	300			
		V_{CE}=2V, I_C=1A	300			
		V_{CE}=2V, I_C=2A	200			
		V_{CE}=2V, I_C=3A	100			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=500mA,I_B=50mA			80	mV
		I_C=1A,I_B=50mA			160	mV
		I_C=2A,I_B=100mA			280	mV
		I_C=2A,I_B=200mA			260	mV
		I_C=3A,I_B=300mA			370	mV

UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. UTC reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.