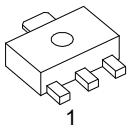
USS5540X

PNP SILICON TRANSISTOR

-40V, -5A PNP LOW $V_{CE(SAT)}$ TRANSISTOR



SOT-89

■ DESCRIPTION

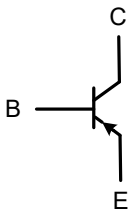
The UTC **USS5540X** is an PNP low $V_{CE(SAT)}$ transistor in a SOT-89 small and flat lead Surface-Mounted Device(SMD) plastic package.

NPN complement: USS4540X.

■ FEATURES

* 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
* Green & Pb Free

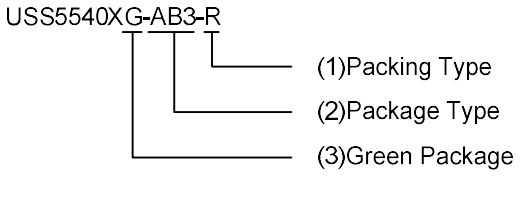
■ EQUIVALENT CIRCUIT



■ ORDERING INFORMATION

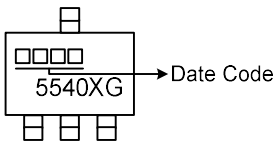
Ordering Number	Package	Pin Assignment			Packing
		1	2	3	
USS5540XG-AB3-R	SOT-89	B	C	E	Tape Reel

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



(1) R: Tape Reel
(2) AB3: SOT-89
(3) G: Halogen Free and Lead Free

■ MARKING



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

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-40	V
Emitter-Base Voltage	V_{EBO}	-6	V
Collector Current	I_C	-5	A
Peak Collector Current	I_{CM}	-10	A
Collector Current	I_B	-1	A
Peak Collector Current	I_{BM}	-2	A
Collector Power Dissipation	P_C	2.5	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.

■ THERMAL DATA

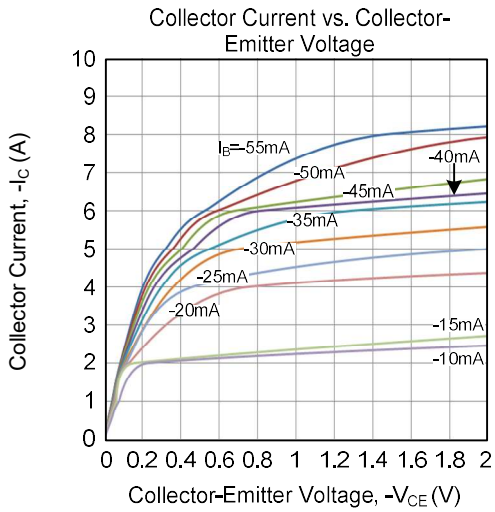
PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	50	°C/W
Junction to Case	θ_{JC}	16	°C/W

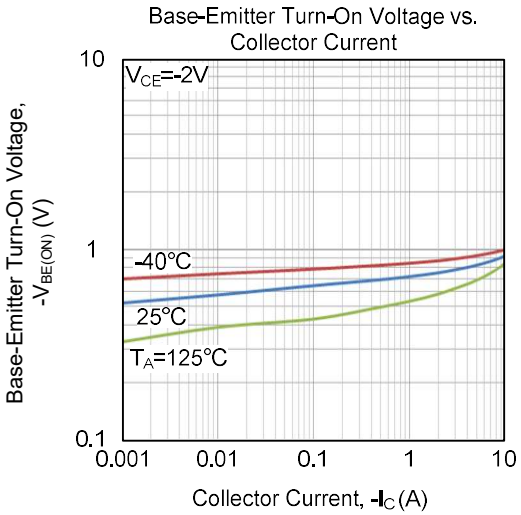
Note: Device mounted on FR-4 substrate PC board, 2oz copper, with 1inch square copper plate.

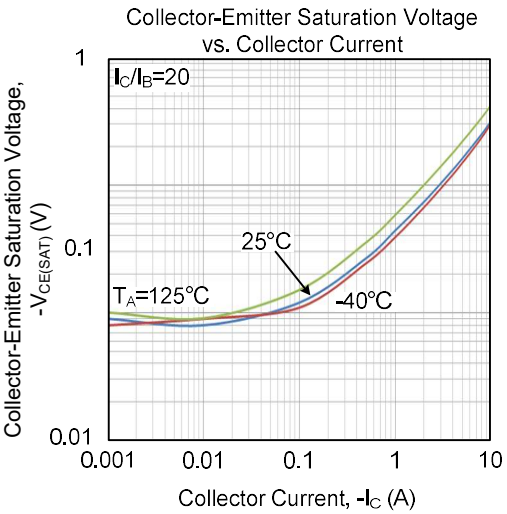
■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

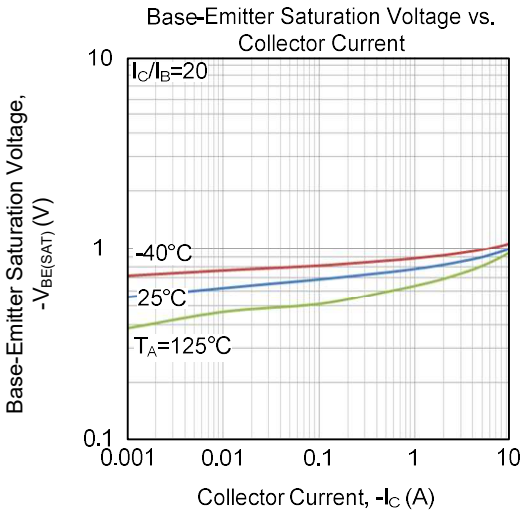
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=-100μA, I_E=0	-40			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=-1mA, I_B=0	-40			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=-100μA, I_C=0	-6			V
Collector-Base Cut-off Current	I_{CBO}	V_{CB}=-30V, I_E=0			-100	nA
Emitter-Base Cut-off Current	I_{EBO}	V_{EB}=-5V, I_C=0			-100	nA
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=-0.5A, I_B=-5mA			-120	mV
		I_C=-1A, I_B=-10mA			-170	mV
		I_C=-2A, I_B=-200mA			-160	mV
		I_C=-4A, I_B=-200mA			-340	mV
		I_C=-5A, I_B=-500mA			-375	mV
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C=-4A, I_B=-200mA			-1.1	V
		I_C=-5A, I_B=-500mA			-1.2	V
Base-Emitter Turn-On Voltage	$V_{BE(ON)}$	V_{CE}=-2V, I_C=-2A			-1	V
DC Current Gain	h_{FE}	V_{CE}=-2V, I_C=-0.5A	250			
		V_{CE}=-2V, I_C=-1A	200			
		V_{CE}=-2V, I_C=-2A	150			
		V_{CE}=-2V, I_C=-5A	50			
Collector Capacitance	C_{OB}	V_{CB}=10V, I_E=i_e=0A, f=1MHz			105	pF

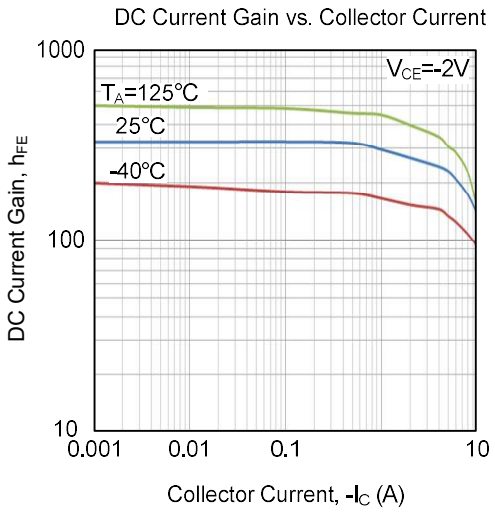
■ TYPICAL CHARACTERISTICS

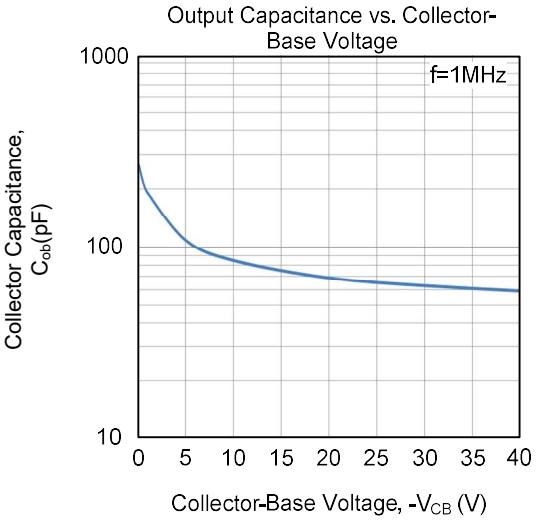




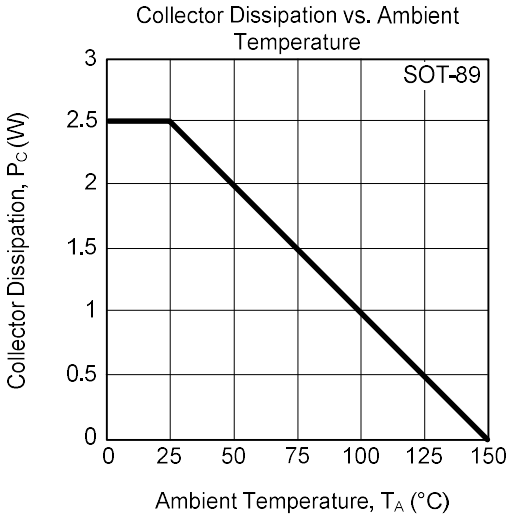








■ TYPICAL CHARACTERISTICS



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