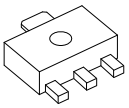
USS5360X **Preliminary** ***PNP EPITAXIAL SILICON TRANSISTOR***

60V PNP LOW SATURATION MEDIUM POWER TRANSISTOR



SOT-89

■ DESCRIPTION

The **USS5360X** is an PNP low $V_{CE(SAT)}$ Breakthrough In Small Signal (BISS) transistor in a medium power.

NPN complement: USS4360X.

■ FEATURES

* Very low collector-emitter saturation voltage $V_{CE(SAT)}$
* High collector current capability IC and ICM
* High collector current gain (h_{FE}) at high IC
* High energy efficiency due to less heat generation
* Smaller required Printed-Circuit Board (PCB) area than for conventional transistors

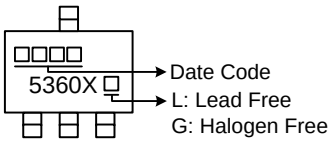
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
USS5360XL-AB3-R	USS5360XG-AB3-R	SOT-89	B	C	E	Tape Reel

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

USS5360XG-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



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■ ABSOLUATE MAXIUM RATINGS (T_A= 25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector to Base Voltage	V_{CBO}	-80	V
Collector to Emitter Voltage	V_{CEO}	-60	V
Emitter to Base Voltage	V_{EBO}	-7	V
Bese Current	I_B	-500	mA
Collector Current	I_C	-3	A
Peak Collector Current (t_P≤1ms)	I_{CM}	-6	A
Collector Dissipation	P_C	0.95	W
Junction Temperature	T_J	+150	°C
Storage Temperature	T_{STG}	-65 ~ +150	°C

Notes: 1. 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.
2. Single pulse, P_W=10ms.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	132	°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	-80			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=-1mA	-60			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=-100μA	-7			V
Collector-Base Cut-off Current	I_{CBO}	V_{CB}=-48V, I_E=0A			-100	nA
Collector-Emitter Cut-off Current	I_{CES}	V_{CE}=-48V, V_{BE}=0V			-100	nA
Emitter-Base Cut-off Current	I_{EBO}	V_{EB}=-5V, I_C=0A			-100	nA
Base-Emitter On Voltage (Note)	$V_{BE(ON)}$	V_{CE}=-5V, I_C=-1V			-1.1	V
Base-Emitter Saturation Voltage (Note)	$V_{BE(SAT)}$	I_C=-1A, I_B=-100mA			-1.2	V
Collector-Emitter Saturation Voltage (Note)	$V_{CE(SAT)}$	I_C=-500mA, I_B=-50mA			-150	mV
		I_C=-1A, I_B=-100mA			-200	mV
		I_C=-2A, I_B=-200mA			-450	mV
		I_C=-3A, I_B=-300mA			-550	mV
DC Current Transfer Ratio (Note)	h_{FE}	I_C=-50mA, V_{CE}=-5V	150			
		I_C=-500mA, V_{CE}=-5V	130			
		I_C=-1A, V_{CE}=-5V	120			
		I_C=-2A, V_{CE}=-5V	100			
		I_C=-3A, V_{CE}=-5V	80			
Transition Frequency (Note)	f_T	V_{CE}=-10V, I_C=-50mA, f=100MHz	65	130		MHz
Collector Capacitance	C_{OB}	V_{CB}=-10V, I_E=i_e=0A, f=1MHz		28	32	pF

Note : Measured under pulsed conditions. Pulse Test: Pulse width ≤ 300μs, Duty cycle≤2%.

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