



USSP5660

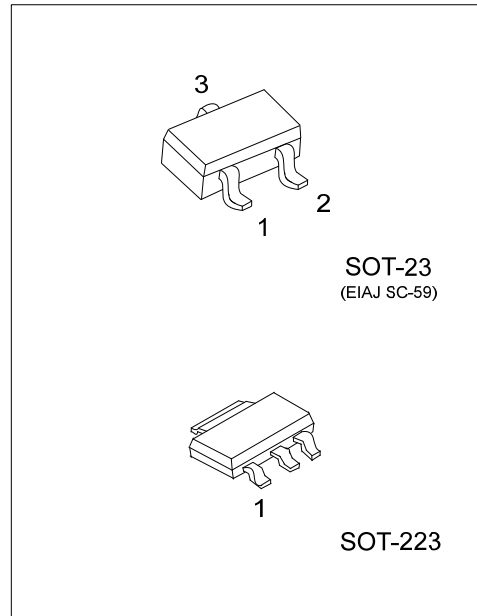
Preliminary

PNP EPITAXIAL SILICON TRANSISTOR

-60V, -6.0A PNP LOW $V_{CE(SAT)}$ TRANSISTOR

FEATURES

- * Low collector-emitter saturation voltage $V_{CE(SAT)}$
- * High collector current capability: I_C and I_{CM}
- * Higher efficiency leading to less heat generation
- * Reduced printed-circuit board requirements
- * Complement: USSN5660



ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
USSP5660L-AA3-R	USSP5660G-AA3-R	SOT-223	B	C	E	Tape Reel
USSP5660L-AE3-R	USSP5660G-AE3-R	SOT-23	B	E	C	Tape Reel

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

<p>USSP5660G-AA3-R</p> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Green Package</p>	<p>(1) R: Tape Reel</p> <p>(2) AA3: SOT-223, AE3: SOT-23</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p>
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MARKING

SOT-223	SOT-23
<p>L: Lead Free G: Halogen Free Date Code</p>	<p>P5660</p>

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

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V _{CB0}	-100	V
Collector-Emitter Voltage		V _{CEO}	-60	V
Emitter-Base Voltage		V _{EBO}	-6	V
Collector Current	DC	I _C	-6	A
	Peak	I _{CM}	-10	A
Base Current (DC)		I _B	-1	A
Power Dissipation (T _A ≤ 25°C)	SOT-223	P _D	1.35	W
	SOT-23		0.35	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. Device mounted on a FR4 printed-circuit board, single-sided copper; tin-plated, mounting pad for collector 1 cm².

■ THERMAL DATA

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	SOT-223	θ _{JA}	92	°C/W
	SOT-23		357	°C/W
Junction to Case	SOT-223	θ _{JC}	20	°C/W
	SOT-23		100	°C/W

Note: Device mounted on a FR4 printed-circuit board, single-sided copper; tin-plated, mounting pad for collector 1 cm².

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector to Base Breakdown Voltage	BV _{CB0}	I _C =-100μA, I _E =0	-100			V
Collector to Emitter Breakdown Voltage	BV _{CEO}	I _C =-1mA, I _B =0	-60			V
Emitter to Base Breakdown Voltage	BV _{EBO}	I _E =-100μA, I _C =0	-6			V
Collector Cut-Off Current	I _{CBO}	V _{CB} =-60V, I _E =0			-100	nA
		V _{CB} =-60V, I _E =0, T _J =150°C			-50	μA
Collector Cut-Off Current	I _{CES}	V _{CE} =-60V, V _{BE} =0			-100	nA
Emitter Cut-Off Current	I _{EBO}	V _{EB} =-5V, I _C =0			-100	nA
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	I _C =-1A, I _B =-100mA			-65	mV
		I _C =-2A, I _B =-200mA			-110	mV
		I _C =-4A, I _B =-400mA			-250	mV
		I _C =-6A, I _B =-300mA			-410	mV
Base-Emitter Saturation Voltage (Note)	V _{BE(SAT)}	I _C =-6A, I _B =-300mA			-1.1	V
Base-Emitter Turn-On Voltage	V _{BE(ON)}	V _{CE} =-2V, I _C =-2A			-0.9	V
Dc Current Gain (Note)	h _{FE}	V _{CE} =-2V, I _C =-10mA	100			
		V _{CE} =-2V, I _C =-2.0A	100		400	
		V _{CE} =-2V, I _C =-4.0A	100			
		V _{CE} =-2V, I _C =-6.0A	50			

Note: Pulse test: t_p ≤ 300μs, Duty cycle ≤ 2%.

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