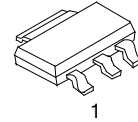


**PZT651****NPN SILICON TRANSISTOR****NPN CURRENT DRIVER
TRANSISTOR****DESCRIPTION**

The UTC **PZT651** is designed for power amplifier, regulator, and switching circuits where speed is important.

FEATURES

- * Collector-Emitter voltage:
 $V_{CEO} = -80V$
- * Collector Dissipation:
 $P_{D(MAX)} = 1.2W$
- * Low collector-Emitter saturation voltage
- * Complementary of PNP PZT751



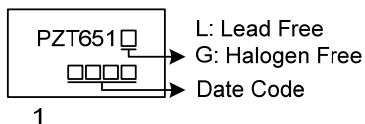
SOT-223

ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
PZT651L-AA3-R	PZT651G-AA3-R	SOT-223	B	C	E	Tape Reel

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

PZT651G-AA3-R (1) Packing Type (2) Package Type (3) Green Package	(1) R: Tape Reel (2) AA3: SOT-223 (3) G: Halogen Free and Lead Free, L: Lead Free
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MARKING

■ ABSOLUTE MAXIMUM RATINGS (NOTE 2, 3)

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at $T_A=25^{\circ}\text{C}$, unless otherwise specified

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	80	V
Collector-Emitter Voltage	V_{CEO}	60	V
Emitter-Base Voltage	V_{EBO}	5	V
DC Collector Current	I_C	4	A
Power Dissipation (Note 4)	P_C	1.2	W
Operating Junction Temperature	T_J	+150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 ~ +150	$^{\circ}\text{C}$

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. These ratings are based on a maximum junction temperature of 150°C .

3. These are steady-state limits.

4. Device is mounted on FR-4 PCB $36\text{mm}\times 18\text{mm}\times 1.5\text{mm}$; mounting pad for the collector lead minimum 6cm^2 .

■ THERMAL DATA ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

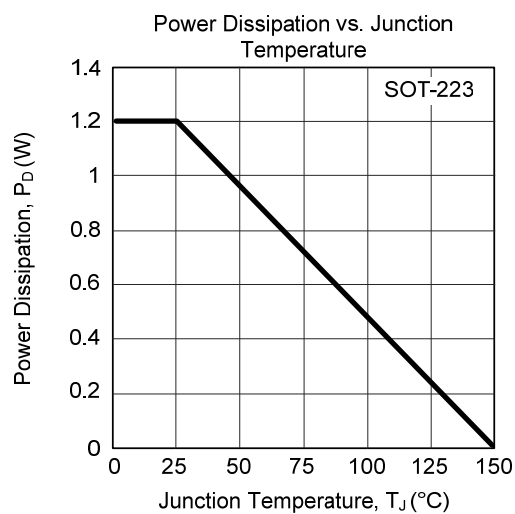
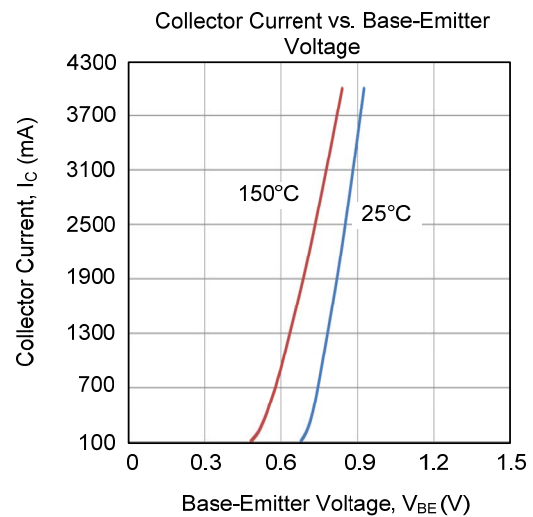
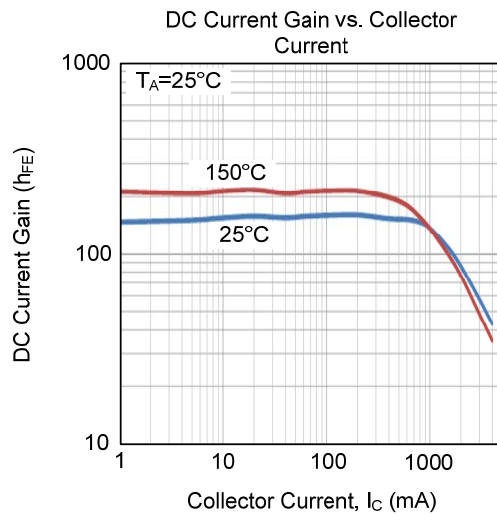
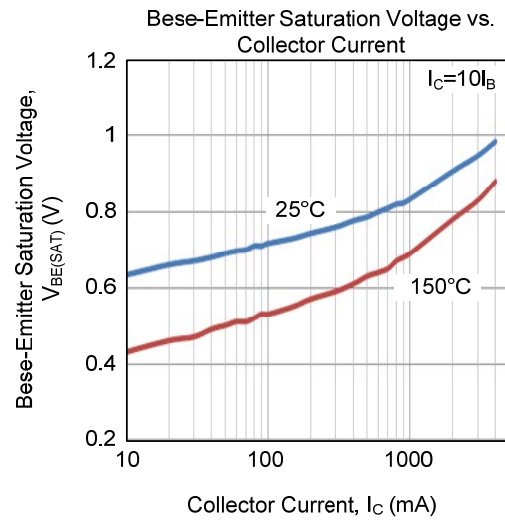
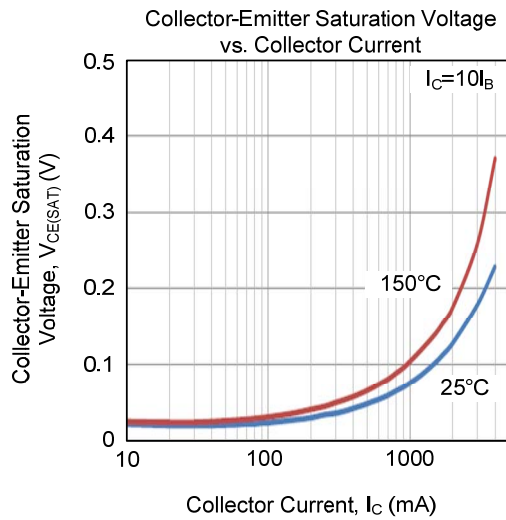
PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	103	$^{\circ}\text{C/W}$

■ ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C=100\mu\text{A}$, $I_E=0$	80			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=10\text{mA}$, $I_B=0$	60			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E=100\mu\text{A}$, $I_C=0$	5			V
Collector Cut-off Current	I_{CBO}	$V_{CB}=80\text{V}$, $I_E=0$			100	nA
Emitter Cut-off Current	I_{EBO}	$V_{BE}=4\text{V}$, $I_C=0$			0.1	μA
DC Current Gain (Note)	h_{FE}	$V_{CE}=2\text{V}$, $I_C=50\text{mA}$	75			
		$V_{CE}=2\text{V}$, $I_C=500\text{mA}$	75			
		$V_{CE}=2\text{V}$, $I_C=1\text{A}$	75			
		$V_{CE}=2\text{V}$, $I_C=2\text{A}$	40			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=1\text{A}$, $I_B=100\text{mA}$			0.3	V
		$I_C=2\text{A}$, $I_B=200\text{mA}$			0.5	
Base-Emitter Saturation Voltage (Note)	$V_{BE(SAT)}$	$I_C=1\text{A}$, $I_B=100\text{mA}$			1.2	V
Base Emitter On Voltage (Note)	$V_{BE(ON)}$	$I_C=1\text{A}$, $V_{CE}=2\text{V}$			1	V
Current Gain Bandwidth Product	f_T	$V_{CE}=5\text{V}$, $I_C=50\text{mA}$, $f=100\text{MHz}$	75			MHz

Note: Pulse test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$.

■ TYPICAL CHARACTERISTICS



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