



PZT2907A

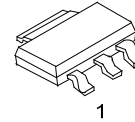
Preliminary

PNP SILICON TRANSISTOR

PNP GENERAL PURPOSE AMPLIFIER

DESCRIPTION

This UTC **PZT2907A** is designed for use as a general purpose amplifier and switch requiring collector currents to 500 mA.



SOT-223

ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
PZT2907AL-AA3-R	PZT2907AG-AA3-R	SOT-223	B	C	E	Tape Reel

<p>PZT2907AL-AA3-R</p>	<p>(1)Packing Type (1) R: Tape Reel</p> <p>(2)Package Type (2) AA3: SOT-223</p> <p>(3)Lead Free (3) G: Halogen Free, L:Lead Free</p>
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■ ABSOLUTE MAXIMUM RATING (Ta=25°C unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Emitter Voltage	V _{CEO}	-60	V
Collector-Base Voltage	V _{CBO}	-60	V
Emitter-Base Voltage	V _{EBO}	-5	V
Collector Current Continuous	I _C	-800	mA
Power Dissipation	P _D	1.3	W
Junction Temperature	T _J	+150	°C
Storage Temperature	T _{STG}	-55 ~ +150	°C

Note: 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. Mounted on PCB with 3mm copper at each terminal

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Thermal Resistance	θ _{JA}	90	°C/W

Note: Mounted on PCB with 3mm copper at each terminal

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Collector-Emitter Breakdown Voltage (Note)	BV _{CEO}	I _C =-10mA, I _B =0	-60			V
Collector-Base Breakdown Voltage	BV _{CBO}	I _C =-10μA, I _E =0	-60			V
Emitter-Base Breakdown Voltage	BV _{EBO}	I _E =-10μA, I _C =0	-5			V
Base Cutoff Current	I _B	V _{CB} =-30V, V _{EB} =-0.5V			-50	nA
Collector Cutoff Current	I _{CEX}	V _{CE} =-30V, V _{BE} =-0.5V			-50	nA
Collector Cutoff Current	I _{CBO}	V _{CB} =-50V, I _E =0 V _{CB} =-50V, I _E =0, T _A =150°C			-0.02 -20	μA
ON CHARACTERISTICS						
DC Current Gain	h _{FE}	I _C =-0.1mA, V _{CE} =-10V	75			
		I _C =-1.0 mA, V _{CE} =-10V	100			
		I _C =-10 mA, V _{CE} =-10V	100			
		I _C =-150 mA, V _{CE} =-10V (Note)	100		300	
		I _C =-500 mA, V _{CE} =-10V (Note)	50			
Collector-Emitter Saturation Voltage (Note)	V _{CE(SAT)}	I _C =-150 mA, I _B =-15mA			-0.4	V
		I _C =-500 mA, I _B =-50mA			-1.6	V
Base-Emitter Saturation Voltage	V _{BE(SAT)}	I _C =-150 mA, I _B =-15mA (Note)			-1.3	V
		I _C =-500 mA, I _B =-50mA			-2.6	V
SMALL SIGNAL CHARACTERISTICS						
Current Gain – Bandwidth Product	f _T	I _C =-50mA, V _{CE} =-20V, f=100MHz	200			MHz
Output Capacitance	C _{ob}	V _{CB} =-10V, I _E =0, f=100kHz			8	pF
Input Capacitance	C _{ib}	V _{EB} =-2V, I _C =0, f=100kHz			30	pF
SWITCHING CHARACTERISTICS						
Turn-on Time	t _{ON}	V _{CC} =30V, I _C =-150mA, I _{B1} =-15mA			45	ns
Delay Time	t _{DLY}				10	ns
Rise Time	t _R				40	ns
Turn-off Time	t _{OFF}	V _{CC} =6V, I _C =-150mA, I _{B1} = I _{B2} =-15mA			100	ns
Storage Time	t _S				80	ns
Fall Time	t _F				30	ns

Note: Pulse Test: Pulse Width ≤ 300ms, Duty Cycle ≤ 2.0%

■ TEST CIRCUITS

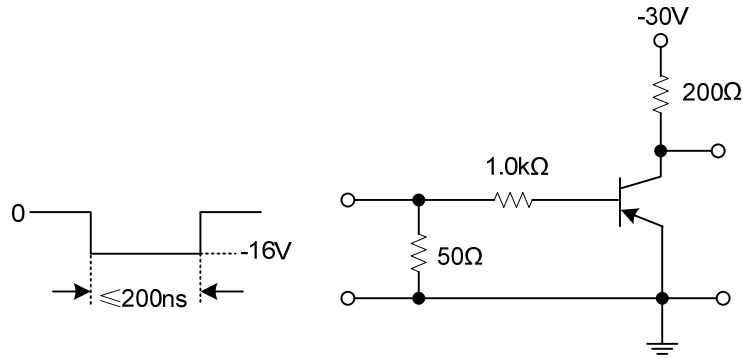


Fig 1. Saturated Turn-On Switching Time Test Circuit

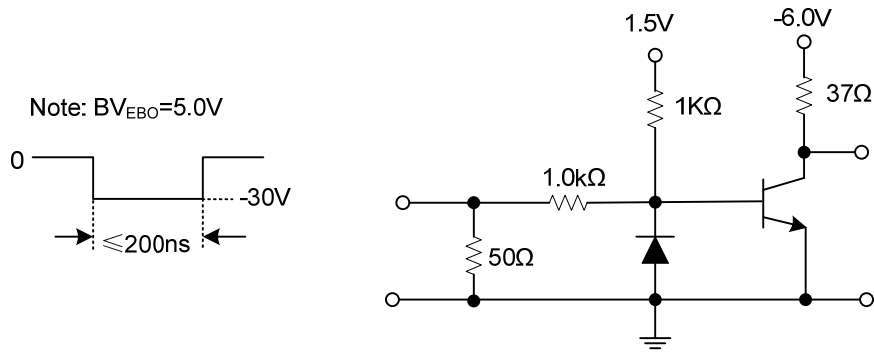


Fig 2. Saturated Turn-Off Switching Time Test Circuit

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