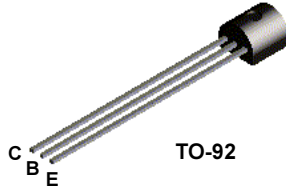
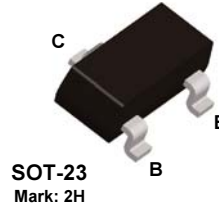


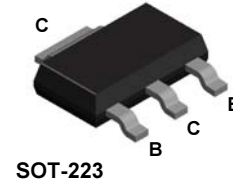
## MPSA55



## MMBTA55



## PZTA55



## PNP General Purpose Amplifier

This device is designed for general purpose amplifier applications at collector currents to 300 mA. Sourced from Process 73. See MPSA56 for characteristics.

### Absolute Maximum Ratings\*

TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V <sub>CE</sub>	Collector-Emitter Voltage	60	V
V <sub>CB</sub>	Collector-Base Voltage	60	V
V <sub>EB</sub>	Emitter-Base Voltage	4.0	V
I <sub>C</sub>	Collector Current - Continuous	500	mA
T <sub>J</sub> , T <sub>stg</sub>	Operating and Storage Junction Temperature Range	-55 to +150	°C

\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

#### NOTES:

- 1) These ratings are based on a maximum junction temperature of 150 degrees C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

### Thermal Characteristics

TA = 25°C unless otherwise noted

Symbol	Characteristic	Max			Units
		MPSA55	*MMBTA55	**PZTA55	
P <sub>D</sub>	Total Device Dissipation	625	350	1,000	mW
	Derate above 25°C	5.0	2.8	8.0	mW/°C
R <sub>θJC</sub>	Thermal Resistance, Junction to Case	83.3			°C/W
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient	200	357	125	°C/W

\* Device mounted on FR-4 PCB 1.6" X 1.6" X 0.06."

\*\* Device mounted on FR-4 PCB 36 mm X 18 mm X 1.5 mm; mounting pad for the collector lead min. 6 cm<sup>2</sup>.

## PNP General Purpose Amplifier

(continued)

### Electrical Characteristics

TA = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
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#### OFF CHARACTERISTICS

V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage*	I <sub>C</sub> = 1.0 mA, I <sub>B</sub> = 0	60		V
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage	I <sub>C</sub> = 100 μA, I <sub>E</sub> = 0	60		V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 100 μA, I <sub>C</sub> = 0	4.0		V
I <sub>CEO</sub>	Collector-Cutoff Current	V <sub>CE</sub> = 60 V, I <sub>B</sub> = 0		0.1	μA
I <sub>CBO</sub>	Collector-Cutoff Current	V <sub>CB</sub> = 60 V, I <sub>E</sub> = 0		0.1	μA

#### ON CHARACTERISTICS

h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 10 mA, V <sub>CE</sub> = 1.0 V I <sub>C</sub> = 100 mA, V <sub>CE</sub> = 1.0 V	100 100		
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 100 mA, I <sub>B</sub> = 10 mA		0.25	V
V <sub>BE(on)</sub>	Base-Emitter On Voltage	I <sub>C</sub> = 100 mA, V <sub>CE</sub> = 1.0 V		1.2	V

#### SMALL SIGNAL CHARACTERISTICS

f <sub>T</sub>	Current Gain - Bandwidth Product	I <sub>C</sub> = 100 mA, V <sub>CE</sub> = 1.0 V, f = 100 MHz	50		MHz
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\*Pulse Test: Pulse Width ≤ 300 μs, Duty Cycle ≤ 2.0%

MPSA55 / MM5TA55 / PZTA55