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Silicon Epitaxial Transistor

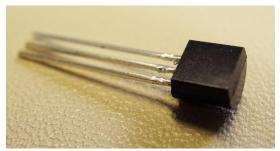
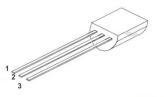


Image serves as a representation only.

## ABSTRACT

The MPS571 is a silicon epitaxial transistor in NPN configuration. This high frequency, low noise amplifier boasts a high power gain. The transistor is encased in a compact three pin durable plastic TO-92 package.



**TO-92** 

Pin Assignment					
1	2	3			
В	E	С			

## **ABSOLUTE MAXIMUM RATING** (T<sub>A</sub>=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-base voltage	V <sub>CBO</sub>	20	V
Collector-emitter voltage	V <sub>CEO</sub>	12	V
Emitter-base voltage	V <sub>EBO</sub>	3	V
Collector current	lc	100	mA
Total power dissipation	Ρ <sub>τ</sub>	600	mW
Junction Temperature	TJ	125	°C
Operating Temperature	T <sub>OPR</sub>	-20 ~ +85	°C
Storage Temperature	T <sub>STG</sub>	-40 ~ +150	°C

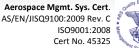
Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cutoff Current	I <sub>CBO</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0			1.0	μA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =1V, I <sub>C</sub> =0			1.0	μA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =20mA	50		300	
Gain bandwidth Product	f⊤	V <sub>CE</sub> =10V, I <sub>C</sub> =20mA		7		GHz
Feed-Back Capacitance	C <sub>re</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1.0MHz			1.0	рF
Noise Figure	NF	V <sub>CE</sub> =10V, I <sub>C</sub> =7mA, f=1.0GHz		1.1		dB

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