

BF224 is an NPN silicon planar epitaxial transistor designed for general purpose high frequency oscillator, amplifier, and mixer applications.

CASE TO-92E



### ABSOLUTE MAXIMUM RATINGS

Collector-Base Voltage	V <sub>CBO</sub>	45V
Collector-Emitter Voltage	V <sub>CEO</sub>	30V
Emitter-Base Voltage	V <sub>EBO</sub>	4V
Collector Current	I <sub>C</sub>	50mA
Total Power Dissipation	P <sub>tot</sub>	250mW
Operating Junction & Storage Temperature	T <sub>j</sub> , T <sub>stg</sub>	-55 to +150°C

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

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Collector-Base Breakdown Voltage	BV <sub>CBO</sub>	45			V	I <sub>C</sub> =100μA I <sub>E</sub> =0
Collector-Emitter Breakdown Voltage	BV <sub>CEO</sub>	30			V	I <sub>C</sub> =7mA I <sub>B</sub> =0
Emitter-Base Breakdown Voltage	BV <sub>EBO</sub>	4			V	I <sub>E</sub> =100μA I <sub>C</sub> =0
Collector Cutoff Current	I <sub>CBO</sub>			100 10	nA μA	V <sub>CB</sub> =20V I <sub>E</sub> =0 V <sub>CB</sub> =20V T <sub>A</sub> =85°C
Emitter Cutoff Current	I <sub>EBO</sub>			100	nA	V <sub>EB</sub> =3V I <sub>C</sub> =0
Collector-Emitter Saturation Voltage	V <sub>CE(SAT)</sub>			0.15	V	I <sub>C</sub> =10mA I <sub>B</sub> =1mA
Base-Emitter Voltage	V <sub>BE</sub>			0.9	V	I <sub>C</sub> =7mA V <sub>CB</sub> =10V
D.C. Current Gain	h <sub>FE</sub>	30				I <sub>C</sub> =7mA V <sub>CE</sub> =10V
Current Gain-Bandwidth Product	f <sub>T</sub>	300	450 500		MHz MHz	I <sub>C</sub> =1.5mA V <sub>CE</sub> =10V I <sub>C</sub> =7mA V <sub>CE</sub> =10V
Feedback Capacitance	C <sub>re</sub>		0.3		pF	I <sub>E</sub> =1mA V <sub>CB</sub> =10V f=10.7MHz