

MICRO ELECTRONICS

2N2193

NPN

SILICON
TRANSISTOR

2N2193 is NPN silicon planar transistor designed for medium power switching and amplifier applications.

TO-39



ABSOLUTE MAXIMUM RATINGS

Collector-Base Voltage	VCBO	80V
Collector-Emitter Voltage	VCEO	50V
Emitter-Base Voltage	VEBO	8V
Collector Current	IC	1A
Total Power Dissipation	Ptot	800mW
Operating Junction & Storage Temperature	Tj, Tstg	-65 to +200°C

ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise specified)

PARAMETER	SYMBOL	MIN	MAX	UNIT	TEST CONDITIONS
Collector-Base Breakdown Voltage	BVCBO	80		V	IC=100µA IE=0
Collector-Emitter Breakdown Voltage	LVCEO	50		V	IC=10mA IB=0
Emitter-Base Breakdown Voltage	BVEBO	8		V	IE=100µA IC=0
Collector Cutoff Current	ICBO		10	nA	VCB=60V IE=0
			25	µA	VCB=60V TA=150°C
Emitter Cutoff Current	IEBO		50	nA	VEB=5V IC=0
D.C. Current Gain	HFE	15			VCE=10V IC=100µA
		30			VCE=10V IC=10mA
		40	120		VCE=10V IC=150mA*
		20			VCE=10V IC=500mA*
		15			VCE=10V IC=1A*
		30			VCE=1V IC=150mA*

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PARAMETER	SYMBOL	MIN	MAX	UNIT	TEST CONDITIONS
Base-Emitter Saturation Voltage	V _{BE(sat)}		1.3	V	I _C =150mA I _B =15mA*
Collector-Emitter Saturation Voltage	V _{CE(sat)}		0.35	V	I _C =150mA I _B =15mA*
Small Signal Current Gain	h _{fe}	2.5			V _{CE} =10V I _C =50mA f=20MHz
Output Capacitance	C _{ob}		20	pF	V _{CB} =10V f=1MHz

* Pulse Test : Pulse Width = 300 μ S, Duty Cycle \leq 2%.