



TIP30 TIP30A TIP30B TIP30C

COMPLEMENTARY SILICON EPITAXIAL-BASE POWER TRANSISTORS

MICRO ELECTRONICS

CASE T0-220B

THE TIP29 SERIES (NPN) AND TIP 30 SERIES (PNP) ARE COMPLEMENTARY SILICON EPITAXIAL BASE POWER TRANSISTORS DESIGNED FOR POWER AMPLIFIERS AND SWITCHING APPLICATIONS.



BCE

ABSOLUTE MAXIMUM RATINGS

For p-n-p devices, voltage and current values are negative.

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Collector Current
Collector Peak Current
Base Current
Total Power Dissipation @ $T_G \leq 25^\circ\text{C}$
@ $T_A \leq 25^\circ\text{C}$
Operating Junction & Storage Temperature

VCBO
VCEO
VEBO
IC
ICM
IB
Ptot

Tj, Tstg

TIP29 TIP29A TIP29B TIP29C
TIP30 TIP30A TIP30B TIP30C

40V 60V 80V 100V
40V 60V 80V 100V
5V 5V 5V 5V
1A 1A 1A 1A
3A 3A 3A 3A
0.4A
30W
2W

-65 to 150°C

THERMAL RESISTANCE

Junction to Case
Junction to Ambient

θ_{jc}
 θ_{ja}

4.17°C/W max.
62.5°C/W max.

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

PARAMETER	SYMBOL	TIP29		TIP29A		TIP29B		UNIT	TEST CONDITIONS
		TIP30	TIP30A	TIP30A	TIP30A	TIP30B	TIP30B		
Collector-Emitter Breakdown Voltage	LVCEO*	40	60	60	60	80	80	V	IC=30mA IB=0
Collector Cutoff Current	ICEO	0.3	0.3	0.3	0.3	0.3	0.3	mA	VCE=30V IB=0
								mA	VCE=60V IB=0
Collector Cutoff Current	ICES	0.2	0.2	0.2	0.2	0.2	0.2	mA	VCE=40V VBE=0
								mA	VCE=60V VBE=0
								mA	VCE=80V VBE=0
Emitter Cutoff Current	IEBO	1	1	1	1	1	1	mA	VEB=5V IC=0
Collector-Emitter Saturation Voltage	VCE(sat)*	0.7	0.7	0.7	0.7	0.7	0.7	V	IC=1A IB=125mA
Base-Emitter Voltage	VBE *	1.3	1.3	1.3	1.3	1.3	1.3	V	IC=1A VCE=4V
D.C. Current Gain	HFE	40	40	40	40	40	40		IC=0.2A VCE=4V
		15 75	15 75	15 75	15 75	15 75	15 75		IC=1A VCE=4V
Small Signal Current Gain	hfe	20	20	20	20	20	20		IC=0.2A VCE=10V f=1kHz
Current Gain-Bandwidth Product	fT	3	3	3	3	3	3	MHz	IC=0.2A VCE=10V f=1MHz

* Pulse Test : Pulse Width=0.3mS, Duty Cycle=1%

TIP30C same as TIP30B, except LVCEO.

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