



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	VCBO	
Collector-Emitter Voltage	VCEO	
Emitter-Base Voltage	VEBO	
Collector Current	IC	
Collector Peak Current	ICM	
Base Current	IB	
Total Power Dissipation @ $T_G \leq 25^\circ\text{C}$	Ptot	
@ $T_A \leq 25^\circ\text{C}$		
Operating Junction & Storage Temperature	Tj, Tstg	

TIP29 TIP30	TIP29A TIP30A	TIP29B TIP30B	TIP29C 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	$\theta_{jc}$	4.17°C/W	max.
Junction to Ambient	$\theta_{ja}$	62.5°C/W	max.

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

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

**MICRO ELECTRONICS LTD.**

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