



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.

		TIP29 TIP30	TIP29A TIP30A	TIP29B TIP30B	TIP29C TIP30C
Collector-Base Voltage	V _{CB0}	40V	60V	80V	100V
Collector-Emitter Voltage	V _{CE0}	40V	60V	80V	100V
Emitter-Base Voltage	V _{EB0}	5V	5V	5V	5V
Collector Current	I _C	1A	1A	1A	1A
Collector Peak Current	I _{CM}	3A	3A	3A	3A
Base Current	I _B		0.4A		
Total Power Dissipation @ T _G ≤ 25°C	P _{tot}		30W		
@ T _A ≤ 25°C			2W		
Operating Junction & Storage Temperature	T _j , T _{stg}	-65 to 150°C			
THERMAL RESISTANCE					
Junction to Case	θ _{jc}	4.17°C/W		max.	
Junction to Ambient	θ _{ja}	62.5°C/W		max.	

ELECTRICAL CHARACTERISTICS (T_A=25°C)

PARAMETER	SYMBOL	TIP29		TIP29A		TIP29B		UNIT	TEST CONDITIONS
		TIP30	MIN	MAX	TIP30A	MIN	MAX		
Collector-Emitter Breakdown Voltage	V _{CE0} *	40		60		80		V	I _C =30mA I _B =0
Collector Cutoff Current	I _{CEO}	0.3		0.3		0.3		mA	V _{CE} =30V I _B =0
								mA	V _{CE} =60V I _B =0
Collector Cutoff Current	I _{CES}	0.2		0.2		0.2		mA	V _{CE} =40V V _{BE} =0
								mA	V _{CE} =60V V _{BE} =0
								mA	V _{CE} =80V V _{BE} =0
Emitter Cutoff Current	I _{EB0}	1		1		1		mA	V _{EB} =5V I _C =0
Collector-Emitter Saturation Voltage	V _{CE(sat)} *	0.7		0.7		0.7		V	I _C '=1A I _B =125mA
Base-Emitter Voltage	V _{BE} *	1.3		1.3		1.3		V	I _C =1A V _{CE} =4V
D.C. Current Gain	H _{FE}	40		40		40			I _C =0.2A V _{CE} =4V
		15	75	15	75	15	75		I _C =1A V _{CE} =4V
Small Signal Current Gain	h _{fe}	20		20		20			I _C =0.2A V _{CE} =10V f=1kHz
Current Gain-Bandwidth Product	f _T	3		3		3		MHz	I _C =0.2A V _{CE} =10V f=1MHz

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

TIP30C same as TIP30B, except LVCE0.

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