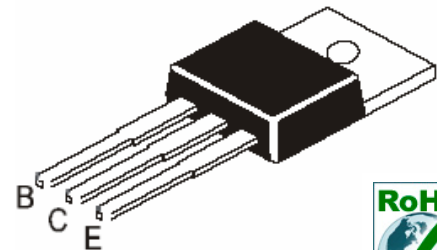


NPN High Voltage Power Transistors

Features

- Application for High Voltage and Switching Circuit
- RoHS Compliant



TO-220



Maximum Ratings *(T_{Ambient}=25°C unless noted otherwise)*

Symbol	Description	Value	Unit	Conditions	
V_{CB0}	Collector-Base Voltage:	TIP47	350	V	Open Emitter
		TIP48	400		
		TIP49	450		
		TIP50	500		
V_{CEO}	Collector-Emitter Voltage:	TIP47	250	V	Open Base
		TIP48	300		
		TIP49	350		
		TIP50	400		
V_{EBO}	Emitter-Base Voltage	5	V	Open Collector	
I_C	Collector Current (Continuous)	1	A		
I_{CP}	Collector Current (Peak)	2	A		
I_B	Base Current	0.6	A		
P_D	Collector Power Dissipation	40	W	T _C = 25 °C	
		0.32	mW/° C	Derate above 25 °C	
T_J,T_{STG}	Operating Junction and Storage	-55 to 150	° C		

Thermal Characteristics

Symbol	Description	Value	Unit
R_{th(j-a)}	Thermal Resistance from Junction to Ambient	62.5	° C/W
R_{th(j-c)}	Thermal Resistance from Junction to Case	3.125	° C/W

NPN High Voltage Power Transistors

TIP47/48/49/50

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

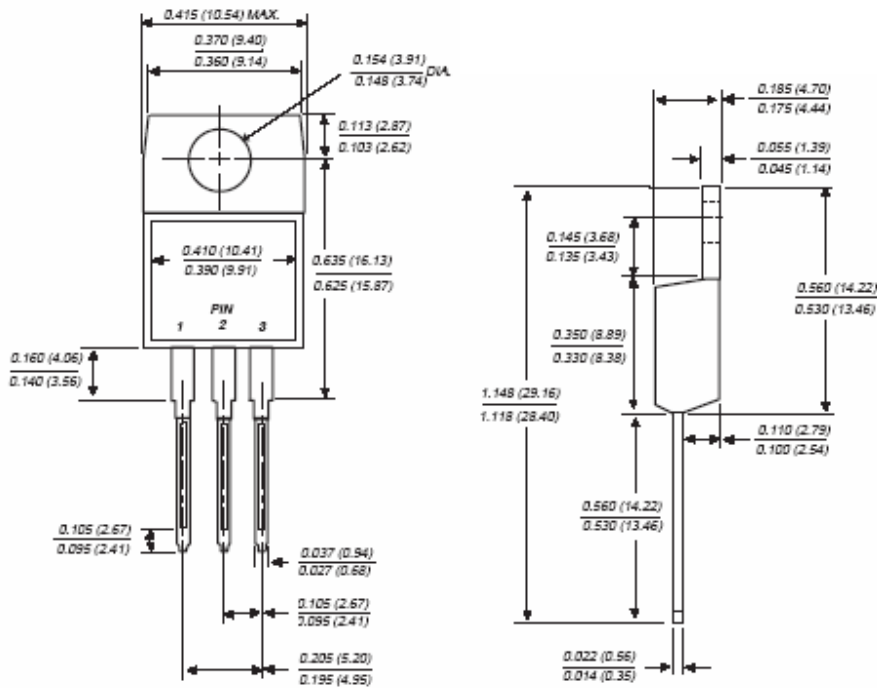
Symbol	Description	Min.	Max.	Unit	Conditions
V_{CEO} (sus)	Collector- Emitter Sustaining Voltage TIP47 TIP48 TIP49 TIP50	250 300 350 400	--	V	$I_C = 30mA; I_B = 0$
I_{CEO}	Collector Cut-Off Current TIP47 TIP48 TIP49 TIP50	--	1 1 1 1	mA	$V_{CE} = 150V, I_B = 0$ $V_{CE} = 200V, I_B = 0$ $V_{CE} = 250V, I_B = 0$ $V_{CE} = 300V, I_B = 0$
I_{CES}	Collector Cut-Off Current TIP47 TIP48 TIP49 TIP50	--	1 1 1 1	mA	$V_{CE} = 350V, V_{BE} = 0$ $V_{CE} = 400V, V_{BE} = 0$ $V_{CE} = 450V, V_{BE} = 0$ $V_{CE} = 500V, V_{BE} = 0$
I_{EBO}	Emitter Cut-Off Current	--	1	mA	$V_{EB} = 5V, I_C = 0$
h_{FE}	* DC Current Gain	30 10	150		$V_{CE} = 10V, I_C = 0.3A$ $V_{CE} = 10V, I_C = 1A$
V_{CE(sat)}	* Collector-Emitter Saturation Voltage	--	1	V	$I_C = 1A; I_B = 0.2A$
V_{BE(on)}	* Base-Emitter On Voltage	--	1.5	V	$V_{CE} = 10V, I_C = 1A$
f_T	Current Gain Bandwidth Product	10	--	MHz	$V_{CE} = 10V, I_C = 0.2A, f=2MHz$
t_{ON}	Turn ON Time	--	0.5	μs	$V_{CC} = 400V,$ $5 I_{B1} = -2.5 I_{B2} = I_C = 6A$ $R_L = 66.7\Omega$
t_{STG}	Storage Time	--	3	μs	
t_F	Fall Time	--	0.3	μs	
* Pulse Test: Pulse Width $\leq 300\mu s$, duty Cycle $\leq 2\%$					

NPN High Voltage Power Transistors

TIP47/48/49/50

Package Dimensions

TO-220



Pin Configuration

1. Base
2. Collector
3. Emitter

NPN High Voltage Power Transistors

TIP47/48/49/50

How to contact us:

US HEADQUARTERS

28040 WEST HARRISON PARKWAY, VALENCIA, CA 91355-4162

Tel: (800) TAITRON (800) 824-8766 (661) 257-6060

Fax: (800) TAITFAX (800) 824-8329 (661) 257-6415

Email: taitron@taitroncomponents.com

Http://www.taitroncomponents.com

TAITRON COMPONENTS MEXICO, S.A .DE C.V.

BOULEVARD CENTRAL 5000 INTERIOR 5 PARQUE INDUSTRIAL ATITALAQUIA, HIDALGO C.P.

42970 MEXICO

Tel: +52-55-5560-1519

Fax: +52-55-5560-2190

TAITRON COMPONENTS INCORPORATED REPRESENTAÇÕES DO BRASIL LTDA

RUA DOMINGOS DE MORAIS, 2777, 2.ANDAR, SALA 24 SAÚDE - SÃO PAULO-SP 04035-001 BRAZIL

Tel: +55-11-5574-7949

Fax: +55-11-5572-0052

TAITRON COMPONENTS INCORPORATED, SHANGHAI REPRESENTATIVE OFFICE

METROBANK PLAZA, 1160 WEST YAN' AN ROAD, SUITE 1503, SHANGHAI, 200052, CHINA

Tel: +86-21-5424-9942

Fax: +86-21-5424-9931