

CentralTM Semiconductor Corp.

145 Adams Avenue, Hauppauge, NY 11788 USA
Tel: (631) 435-1110 • Fax: (631) 435-1824

Manufacturers of World Class Discrete Semiconductors

TIP47 THRU TIP50

NPN SILICON HIGH VOLTAGE
POWER TRANSISTOR

JEDEC TO-220AB CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR TIP47 Series types are Silicon NPN Triple Diffused Mesa Power Transistors designed for high voltage applications such as power supplies and other switching applications.

MAXIMUM RATINGS (T_C=25°C unless otherwise noted)

	SYMBOL	TIP47	TIP48	TIP49	TIP50	UNIT
Collector-Base Voltage	V _{CB0}	350	400	450	500	V
Collector-Emitter Voltage	V _{CE0}	250	300	350	400	V
Emitter-Base Voltage	V _{EB0}		5.0			V
Collector Current	I _C		1.0			A
Collector Current-Peak	I _{CM}		2.0			A
Base Current	I _B		0.6			A
Power Dissipation	P _D		40			W
Unclamped Inducting Load	E		20			mJ
Operating and Storage Temperature	T _J , T _{stg}		-65 TO +150			°C
Thermal Resistance	θ _{JC}		3.13			°C/W

ELECTRICAL CHARACTERISTICS (T_C=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
I _{CES}	V _{CE} =Rated V _{CB0}		1.0	mA
I _{CE0}	V _{CE} =150V (TIP47)		1.0	mA
I _{CE0}	V _{CE} =200V (TIP48)		1.0	mA
I _{CE0}	V _{CE} =250V (TIP49)		1.0	mA
I _{CE0}	V _{CE} =300V (TIP50)		1.0	mA
I _{EB0}	V _{BE} =5.0V		1.0	mA
BV _{CE0}	I _C =30mA (TIP47)	250		V
BV _{CE0}	I _C =30mA (TIP48)	300		V
BV _{CE0}	I _C =30mA (TIP49)	350		V
BV _{CE0}	I _C =30mA (TIP50)	400		V
h _{FE}	V _{CE} =10V, I _C =0.3A	30	150	
h _{FE}	V _{CE} =10V, I _C =1.0A	10	-	
h _{fe}	V _{CE} =10V, I _C =0.2A, f=1.0kHz	25		
V _{CE(SAT)}	I _C =1.0A, I _B =0.2A		1.0	V
V _{BE(ON)}	V _{CE} =10V, I _C =1.0A		1.5	V
f _T	V _{CE} =10V, I _C =0.2A, f=2.0MHz	10		MHz