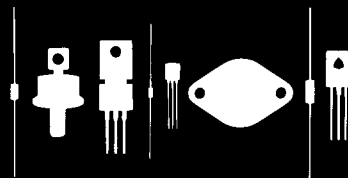


Central
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145 Adams Avenue
Hauppauge, New York 11788



BD439 BD441 NPN
BD440 BD442 PNP

COMPLEMENTARY SILICON
POWER TRANSISTORS

JEDEC TO-126 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR BD439 series types are complementary silicon power transistors manufactured by the epitaxial base process designed for medium power, low switching applications.

MAXIMUM RATINGS (T_C=25°C)

	SYMBOL	BD439 BD440	BD441 BD442	UNIT
Collector-Emitter Voltage	V _{CEO}	60	80	V
Collector-Emitter Voltage	V _{CES}	60	80	V
Collector-Base Voltage	V _{CB0}	60	80	V
Emitter-Base Voltage	V _{EBO}		5.0	V
Collector Current	I _C		4.0	A
Collector Current - PEAK	I _{CM}		7.0	A
Base Current	I _B		1.0	A
Power Dissipation	P _D		36	W
Operating and Storage Junction Temperature	T _J , T _{STG}	-65 to +150		°C
Thermal Resistance	θ _{JC}	3.5		°C/W

ELECTRICAL CHARACTERISTICS (T_C=25°C)

SYMBOL	TEST CONDITIONS	BD439		BD441		UNIT
		BD440	BD442	BD441	BD442	
		MIN	MAX	MIN	MAX	
I _{CES}	V _{CE} =Rated V _{CEO}		100		100	μA
I _{CB0}	V _{CB} =Rated V _{CB0}		100		100	μA
I _{EBO}	V _{EB} =5.0V		1.0		1.0	mA
BV _{CEO}	I _C =100mA	60		80		V
V _{CE(SAT)}	I _C =2.0A, I _B =0.2A		0.8		0.8	V
V _{BE(ON)}	V _{CE} =5.0V, I _C =10mA		0.5 TYP		0.5 TYP	V
V _{BE(ON)}	V _{CE} =1.0V, I _C =2.0A		1.5		1.5	V
h _{FE}	V _{CE} =5.0V, I _C =10mA (BD439, BD441)	20	130	15	130	
h _{FE}	V _{CE} =5.0V, I _C =10mA (BD440, BD442)	20	140	15	140	
h _{FE}	V _{CE} =1.0V, I _C =500mA	40	140	40	140	
h _{FE}	V _{CE} =1.0V, I _C =2.0A	25	-	15	-	
f _T	V _{CE} =1.0V, I _C =250mA	3.0		3.0		MHz

**Central™
Semiconductor Corp.**

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