TIGER ELECTRONIC CO.,LTD

Product specification

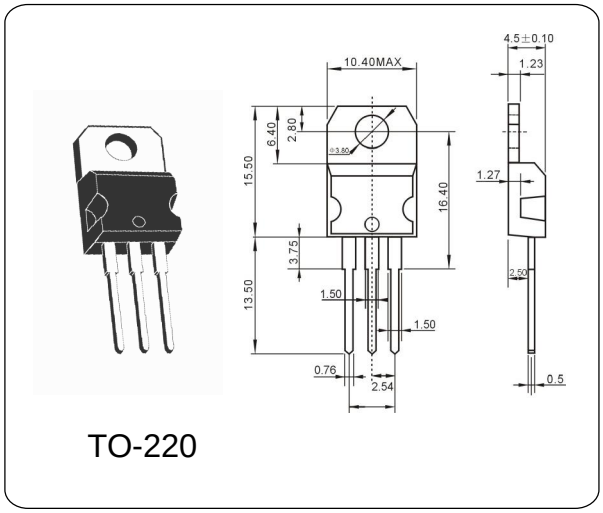
Complementary Silicon Power Darlington Ttransistors — BDX53F / BDX54F

DESCRIPTION

The BDX53F are silicon Epitaxial-Base NPN power transistors in monolithic Darlington configuration mounted in Jedec TO-220 plastic package. They are intented for use in hammer drivers, audio amplifiers and other medium power linear and switching applications.
The complementary PNP types are BDX54F respectively.

ABSOLUTE MAXIMUM RATINGS (Ta = 25 °C)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	160	V
Collector-Emitter Voltage	V_{CEO}	160	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	8.0	A
Base Current	I_B	0.2	A
Total Dissipation at	P_{tot}	60	W
Max. Operating Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55~150	°C



TO-220

ELECTRICAL CHARACTERISTICS (Ta = 25 °C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector Cut-off Current	I_{CBO}	V_{CB}=160V, I_E=0	—	—	0.2	mA
Collector Cut-off Current	I_{CEO}	V_{CE}=80V, I_B=0	—	—	0.5	mA
Emitter Cut-off Current	I_{EBO}	V_{EB}=5.0V, I_C=0	—	—	2.0	mA
Collector-Emitter Sustaining Voltage	V_{CEO}	I_C=50mA, I_B=0	160	—	—	V
DC Current Gain	h_{FE}	V_{CE}=5V, I_C=2.0A	500	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=2.0A,I_B=10mA	—	—	2.0	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=2.0A,I_B=10mA	—	—	2.5	V
Parallel-diode Forward Voltage	V_F	I_F=2A	—	—	2.5	V