



Complementary Silicon Power Darlington Ttransistors

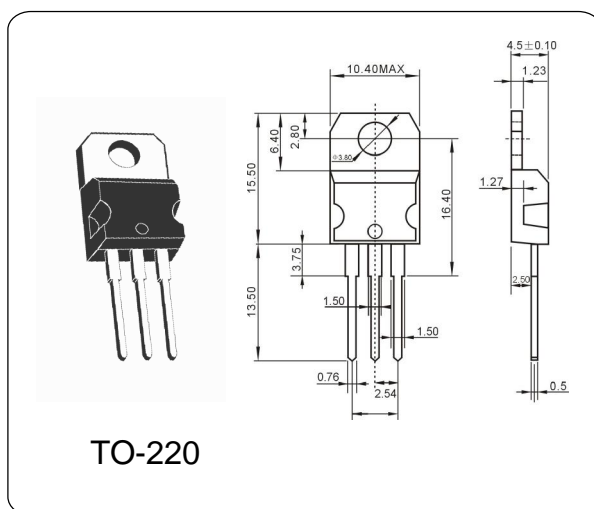
BDX53C / BDX54C

DESCRIPTION

The BDX53C are silicon Epitaxial-Base NPN power transistors in monolithic Darlington configuration mounted in Jedec TO-220 plastic package. They are intended for use in hammer drivers, audio amplifiers and other medium power linear and switching applications. The complementary PNP types are BDX54C respectively.

ABSOLUTE MAXIMUM RATINGS (Ta = 25 °C)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	100	V
Collector-Emitter Voltage	V_{CEO}	100	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



ELECTRICAL CHARACTERISTICS (Ta = 25 °C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector Cut-off Current	I_{CBO}	$V_{CB}=100V, I_E=0$	—	—	0.2	mA
Collector Cut-off Current	I_{CEO}	$V_{CE}=50V, I_B=0$	—	—	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}	$I_C=100mA, I_B=0$	100	—	—	V
DC Current Gain	h_{FE}	$V_{CE}=3V, I_C=3.0A$	750	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=3.0A, I_B=12mA$	—	—	2.0	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=3.0A, I_B=12mA$	—	—	2.5	V
Parallel-diode Forward Voltage	V_F	$I_F=3A$	—	—	2.5	V