

**isc Silicon PNP Darlington Power Transistor**

**BDX54F**

**DESCRIPTION**

- Collector Current  $-I_C = -8A$
- High DC Current Gain-  
:  $h_{FE} = 500(\text{Min}) @ I_C = -2A$
- Complement to Type BDX53F
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

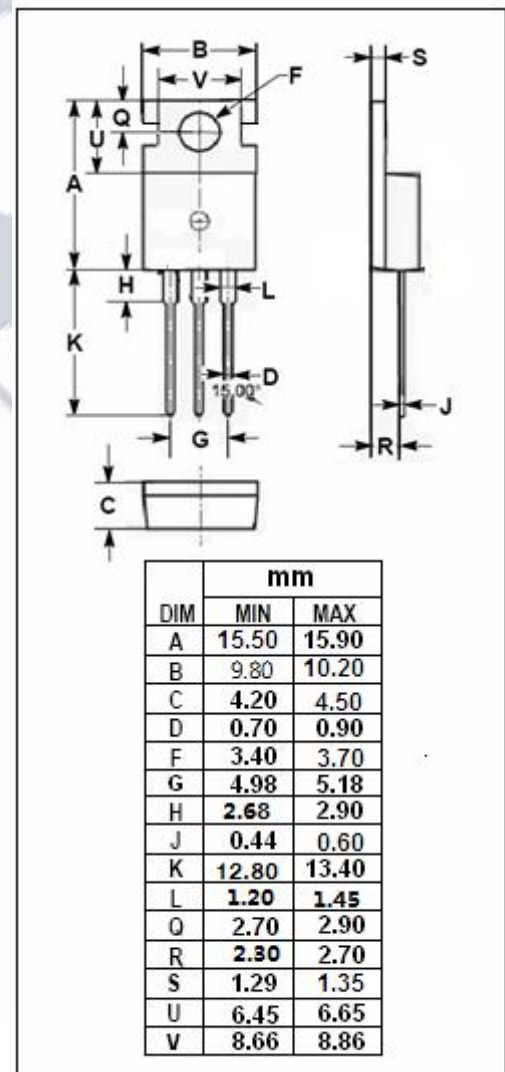
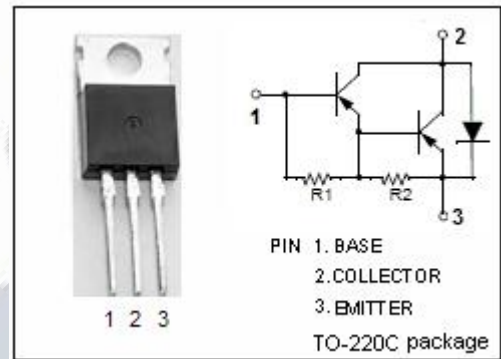
- Designed for use in power linear and switching applications.

**ABSOLUTE MAXIMUM RATINGS( $T_a = 25^\circ\text{C}$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CER}$	Collector-Emitter Voltage	-160	V
$V_{CEO}$	Collector-Emitter Voltage	-160	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-8	A
$I_{CM}$	Collector Current-Peak	-12	A
$I_B$	Base Current-Continuous	-0.2	A
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	60	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-65~150	$^\circ\text{C}$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2.08	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	70	$^\circ\text{C/W}$



**isc Silicon PNP Darlington Power Transistor****BDX54F****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = -50\text{mA}; I_B = 0$	-160			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -2\text{A}; I_B = -10\text{mA}$			-2.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -2\text{A}; I_B = -10\text{mA}$			-2.5	V
$V_{ECF}$	C-E Diode Forward Voltage	$I_F = -2\text{A}$			-2.5	V
$I_{CEO}$	Collector Cutoff Current	$V_{CE} = -80\text{V}; I_B = 0$			-0.5	mA
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -160\text{V}; I_E = 0$			-0.2	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -5\text{V}; I_C = 0$			-5	mA
$h_{FE-1}$	DC Current Gain	$I_C = -2\text{A}; V_{CE} = -5\text{V}$	500			
$h_{FE-2}$	DC Current Gain	$I_C = -3\text{A}; V_{CE} = -5\text{V}$	150			