

isc Silicon PNP Darlington Power Transistor

BDW48

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CE(SUS)} = -120V(\text{Min})$
- High DC Current Gain
: $h_{FE} = 1000(\text{Min}) @ I_C = -5A$
- Low Collector Saturation Voltage
: $V_{CE(sat)} = -2.0V(\text{Max.}) @ I_C = -5.0A$
= $-3.0V(\text{Max.}) @ I_C = -10A$
- Complement to Type BDW43
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

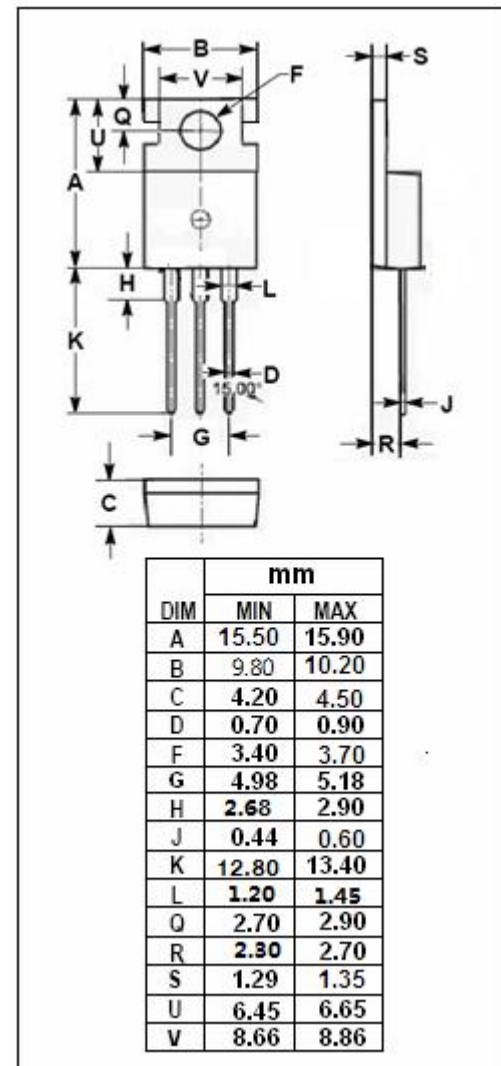
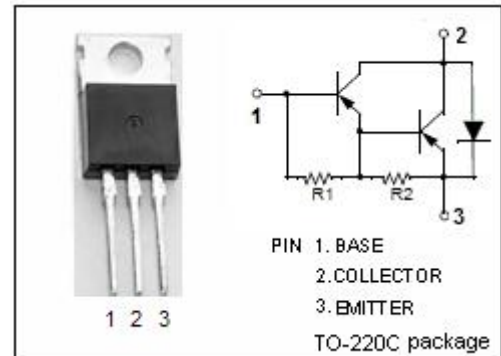
- Designed for general purpose and low speed switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-120	V
V_{CEO}	Collector-Emitter Voltage	-120	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-15	A
I_B	Base Current-Continuous	-0.5	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	85	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.47	$^\circ\text{C/W}$



isc Silicon PNP Darlington Power Transistor**BDW48****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = -30mA; I _B = 0	-120			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = -5A; I _B = -10mA			-2.0	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = -10A; I _B = -50mA			-3.0	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = -10A ; V _{CE} = -4V			-3.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = -120V; I _E = 0			-1.0	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = -60V; I _B = 0			-2.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = -5V; I _C = 0			-2.0	mA
h _{FE-1}	DC Current Gain	I _C = -5A ; V _{CE} = -4V	1000			
h _{FE-2}	DC Current Gain	I _C = -10A ; V _{CE} = -4V	250			
f _T	Current-Gain—Bandwidth Product	I _C = -3A; V _{CE} = -3V; f _{test} = 1MHz	4			MHz
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = -10V; f _{test} = 0.1MHz			300	pF

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