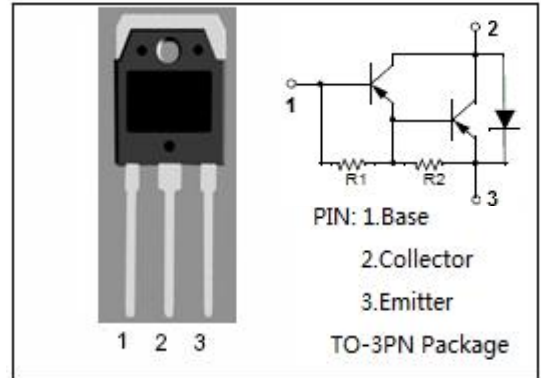


isc Silicon PNP Darlington Power Transistor
BDW84/A/B/C
DESCRIPTION

- Collector Current $-I_C = -15A$
- High DC Current Gain $-h_{FE} = 750(\text{Min}) @ I_C = -6A$
- Complement to Type BDW83/A/B/C
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

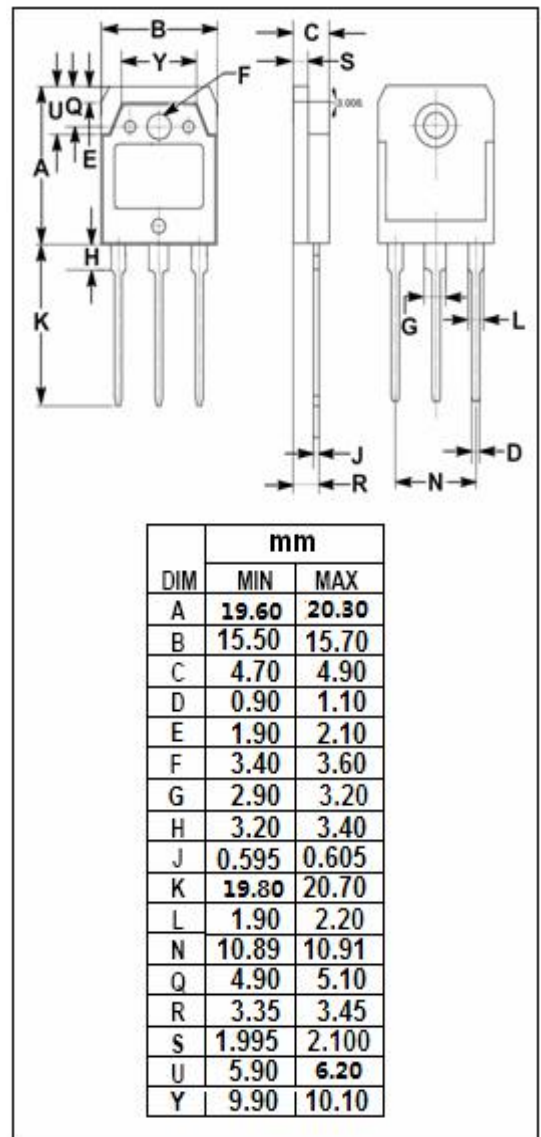
- Designed for general purpose amplifier and low speed switching applications


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

SYMBOL	PARAMETER	VALUE	UNIT	
V_{CER}	Collector-Emitter Voltage	BDW84	-45	V
		BDW84A	-60	
		BDW84B	-80	
		BDW84C	-100	
V_{CEO}	Collector-Emitter Voltage	BDW84	-45	V
		BDW84A	-60	
		BDW84B	-80	
		BDW84C	-100	
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 @ $T_a=25^\circ\text{C}$	3.5	W	
	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	150		
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	0.83	$^\circ\text{C}/\text{W}$



isc Silicon PNP Darlington Power Transistor
BDW84/A/B/C
ELECTRICAL CHARACTERISTICS

 T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT		
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	BDW84	I _C = -30mA ; I _B =0		-45	V		
		BDW84A		-60				
		BDW84B		-80				
		BDW84C		-100				
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = -6A; I _B = -12mA			-2.5	V		
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = -15A; I _B = -150mA			-4.0	V		
V _{BE(on)}	Base-Emitter On Voltage	I _C = -6A ; V _{CE} = -3V			-2.5	V		
V _{ECF}	C-E Diode Forward Voltage	I _F = -15A			-3.5	V		
I _{CEO}	Collector Cutoff Current	BDW84	V _{CE} = -30V; I _B = 0			-1.0	mA	
		BDW84A		V _{CE} = -30V; I _B = 0				
		BDW84B		V _{CE} = -40V; I _B = 0				
		BDW84C		V _{CE} = -50V; I _B = 0				
I _{CBO}	Collector Cutoff Current	BDW84	V _{CB} = -45V; I _E = 0 V _{CB} = -45V; I _E = 0; T _C = 150°C			-0.5	mA	
		BDW84A		V _{CB} = -60V; I _E = 0 V _{CB} = -60V; I _E = 0; T _C = 150°C				-0.5
		BDW84B		V _{CB} = -80V; I _E = 0 V _{CB} = -80V; I _E = 0; T _C = 150°C				-0.5
		BDW84C		V _{CB} = -100V; I _E = 0 V _{CB} = -100V; I _E = 0; T _C = 150°C				-0.5
I _{EBO}	Emitter Cutoff Current	V _{EB} = -5V; I _C =0			-2.0	mA		
h _{FE-1}	DC Current Gain	I _C = -6A ; V _{CE} = -3V	750		20000			
h _{FE-2}	DC Current Gain	I _C = -15A ; V _{CE} = -3V	100					
Switching times								
t _{on}	Turn-on Time	I _C = -10A; I _{B1} = -I _{B2} = -40mA; R _L = 3 Ω ; V _{BE(OFF)} = 4.2V		0.9		μ s		
t _{off}	Turn-off Time			7.0		μ s		

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