

isc Silicon PNP Power Transistor
BDW52/A/B/C
DESCRIPTION

- Collector Current $-I_C = -15A$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = -45V(\text{Min})$ - BDW52; $-60V(\text{Min})$ - BDW52A
 $-80V(\text{Min})$ - BDW52B; $-100V(\text{Min})$ - BDW52C
- Complement to Type BDW51/A/B/C
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

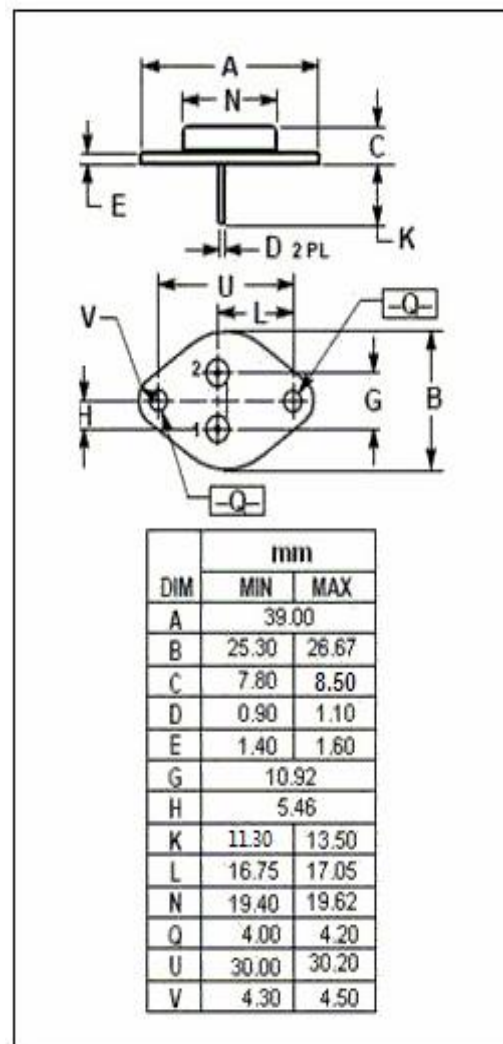
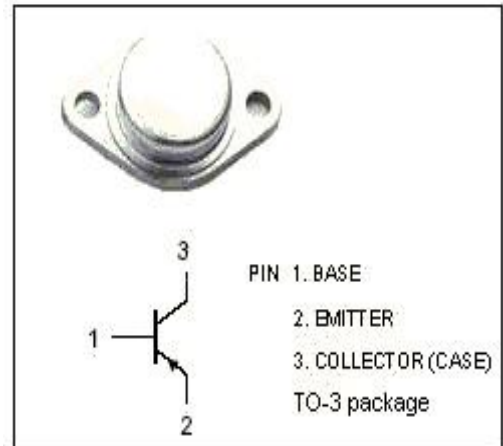
- Designed for use in power linear and switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT	
V_{CBO}	Collector-Base Voltage	BDW52	-45	V
		BDW52A	-60	
		BDW52B	-80	
		BDW52C	-100	
V_{CEO}	Collector-Emitter Voltage	BDW52	-45	V
		BDW52A	-60	
		BDW52B	-80	
		BDW52C	-100	
V_{EBO}	Emitter-Base Voltage	-5	V	
I_C	Collector Current-Continuous	-15	A	
I_{CM}	Collector Current-Peak	-20	A	
I_B	Base Current	-7	A	
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	125	W	
T_J	Junction Temperature	200	$^\circ\text{C}$	
T_{stg}	Storage Temperature Range	-65~200	$^\circ\text{C}$	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.4	$^\circ\text{C/W}$



isc Silicon PNP Power Transistor
BDW52/A/B/C
ELECTRICAL CHARACTERISTICS

 T_C=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT	
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	BDW52	I _C = -30mA; I _B = 0	-45			V	
		BDW52A		-60				
		BDW52B		-80				
		BDW52C		-100				
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage		I _C = -5A; I _B = -0.5A			-1.0	V	
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage		I _C = -10A; I _B = -2.5A			-3.0	V	
V _{BE(sat)}	Base-Emitter Saturation Voltage		I _C = -10A; I _B = -2.5A			-2.5	V	
V _{BE(on)}	Base-Emitter On Voltage		I _C = -5A; V _{CE} = -4V			-1.5	V	
I _{CBO}	Collector Cutoff Current	BDW52	V _{CB} = -45V; I _E = 0 V _{CB} = -45V; I _E = 0; T _C = 150°C			-0.5	mA	
		BDW52A				-5.0		
		BDW52B				-0.5		
		BDW52C				-5.0		
I _{CEO}	Collector Cutoff Current	BDW52	V _{CE} = -22V; I _B = 0			-1.0	mA	
		BDW52A						V _{CE} = -30V; I _B = 0
		BDW52B						V _{CE} = -40V; I _B = 0
		BDW52C						V _{CE} = -50V; I _B = 0
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	20		150		
h _{FE-2}	DC Current Gain		I _C = -10A; V _{CE} = -4V	5				
f _T	Current Gain-Bandwidth Product		I _C = -0.5A; V _{CE} = -4V	3			MHz	

NOTICE:

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.