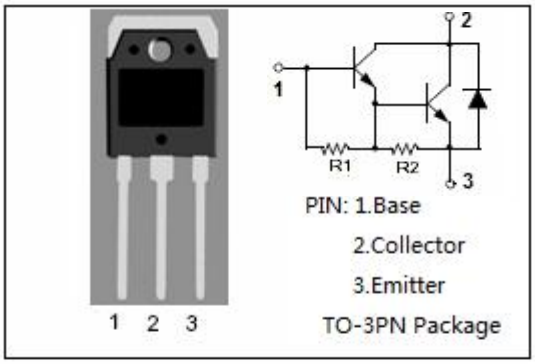
isc Silicon NPN Darlington Power Transistor — BDV65/A/B/C

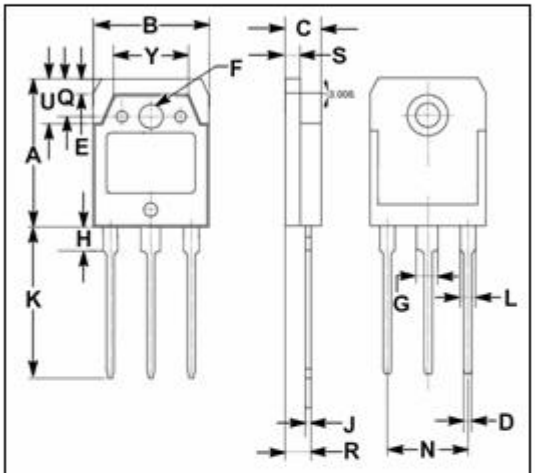
DESCRIPTION

- Collector Current -I_C= 12A
- Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$= 2.0V(Max.)@ I_C= 5A
- Complement to Type BDV64/A/B/C
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for audio output stages and general amplifier and switching applications





DIM	mm MIN	mm MAX
A	19.60	20.30
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	19.80	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.20
Y	9.90	10.10

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER		VALUE	UNIT
V_{CBO}	Collector-Base Voltage	BDV65	60	V
		BDV65A	80	
		BDV65B	100	
		BDV65C	120	
V_{CEO}	Collector-Emitter Voltage	BDV65	60	V
		BDV65A	80	
		BDV65B	100	
		BDV65C	120	
V_{EBO}	Emitter-Base Voltage		5	V
I_C	Collector Current-Continuous		12	A
I_{CM}	Collector Current-Peak		15	A
I_B	Base Current-Continuous		0.5	A
P_C	Collector Power Dissipation @ T_C=25℃		125	W
	Collector Power Dissipation @ T_a=25℃		3.5	
T_J	Junction Temperature		150	℃
T_{stg}	Storage Temperature Range		-65~150	℃

isc Silicon NPN Darlington Power Transistor BDV65/A/B/C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.0	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	35.7	℃/W

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	BDV65	I_C= 30mA; I_B= 0	60			V
		BDV65A		80			
		BDV65B		100			
		BDV65C		120			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage		I_C= 5A; I_B= 20mA			2.0	V
$V_{BE(on)}$	Base-Emitter On Voltage		I_C= 5A; V_{CE}= 4V			2.5	V
I_{CEO}	Collector Cutoff Current		V_{CE}= $^1/_2V_{CEOmax}$; I_B= 0			2.0	mA
I_{CBO}	Collector Cutoff Current	BDV65	V_{CB}= 40V; I_E= 0;T_J= 150℃			2.0	mA
		BDV65A	V_{CB}= 50V; I_E= 0;T_J= 150℃				
		BDV65B	V_{CB}= 60V; I_E= 0;T_J= 150℃				
		BDV65C	V_{CB}= 70V; I_E= 0;T_J= 150℃				
I_{CBO}	Collector Cutoff Current		V_{CB}= V_{CBOmax}; I_E= 0			0.4	mA
I_{EBO}	Emitter Cutoff Current		V_{EB}= 5V; I_C= 0			5	mA
h_{FE}	DC Current Gain		I_C= 5A; V_{CE}= 4V	1000			

isc Silicon NPN Darlington Power Transistor BDV65/A/B/C

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.