

isc Silicon NPN Darlington Power Transistor

BDV65/A/B/C

DESCRIPTION

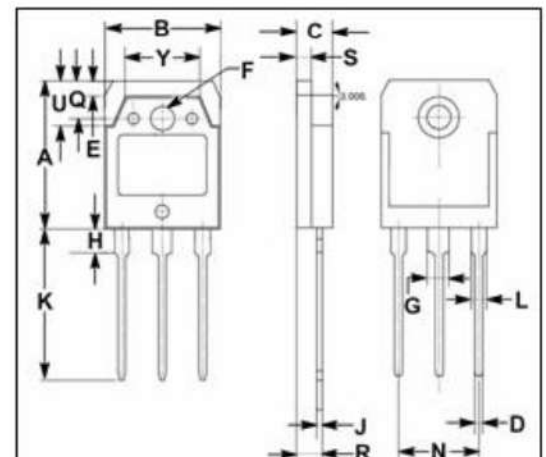
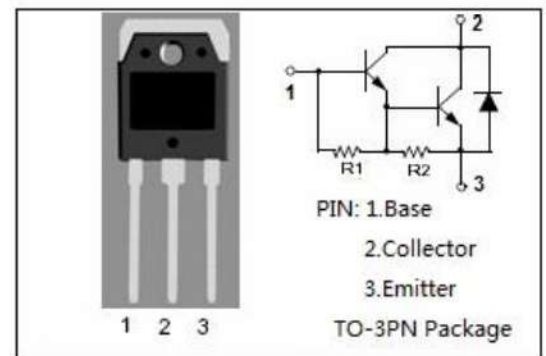
- Collector Current $I_C = 12A$
- Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 2.0V(\text{Max.}) @ I_C = 5A$
- Complement to Type BDV64/A/B/C
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

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

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	BDV65	60
		BDV65A	80
		BDV65B	100
		BDV65C	120
V_{CEO}	Collector-Emitter Voltage	BDV65	60
		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 @ $T_C = 25^\circ C$	125	W
	Collector Power Dissipation @ $T_a = 25^\circ C$	3.5	
T_J	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-65~150	$^\circ C$



DIM	mm	
	MIN	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

isc Silicon NPN Darlington Power Transistor

BDV65/A/B/C

THERMAL CHARACTERISTICS

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

ELECTRICAL CHARACTERISTICS

 $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	BDV65	$I_C = 30\text{mA}; I_B = 0$	60			V
		BDV65A		80			
		BDV65B		100			
		BDV65C		120			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage		$I_C = 5\text{A}; I_B = 20\text{mA}$			2.0	V
$V_{BE(on)}$	Base-Emitter On Voltage		$I_C = 5\text{A}; V_{CE} = 4\text{V}$			2.5	V
I_{CEO}	Collector Cutoff Current		$V_{CE} = \frac{1}{2}V_{CE0max}; I_B = 0$			2.0	mA
I_{CBO}	Collector Cutoff Current	BDV65	$V_{CB} = 40\text{V}; I_E = 0; T_J = 150^\circ\text{C}$			2.0	mA
		BDV65A	$V_{CB} = 50\text{V}; I_E = 0; T_J = 150^\circ\text{C}$				
		BDV65B	$V_{CB} = 60\text{V}; I_E = 0; T_J = 150^\circ\text{C}$				
		BDV65C	$V_{CB} = 70\text{V}; I_E = 0; T_J = 150^\circ\text{C}$				
I_{CBO}	Collector Cutoff Current		$V_{CB} = V_{CB0max}; I_E = 0$			0.4	mA
I_{EBO}	Emitter Cutoff Current		$V_{EB} = 5\text{V}; I_C = 0$			5	mA
h_{FE}	DC Current Gain		$I_C = 5\text{A}; V_{CE} = 4\text{V}$	1000			

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.