



BDV65-A-B-C

NPN SILICON DARLINGTON POWER TRANSISTORS

They are silicon epitaxial base transistors mounted in TO-3PN.
 They are designed for audio output stages and general amplifier and switching applications.
 complementary is BDV64-A- B-C
 Compliance to RoHS.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
V_{CEO}	Collector-Emitter Voltage	BDV65	60	V
		BDV65A	80	
		BDV65B	100	
		BDV65C	120	
V_{CBO}	Collector-Base Voltage	BDV65	60	V
		BDV65A	80	
		BDV65B	100	
		BDV65C	120	
V_{EBO}	Emitter-Base Voltage	BDV65	5.0	V
		BDV65A		
		BDV65B		
		BDV65C		
I_C	Collector Current	BDV65	12	A
		BDV65A		
		BDV65B		
		BDV65C		
I_{CM}	Collector Peak Current	BDV65	15	A
		BDV65A		
		BDV65B		
		BDV65C		
I_B	Base Current	BDV65	0.5	A
		BDV65A		
		BDV65B		
		BDV65C		



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ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit	
P _T	Power Dissipation	T _{mb} = 25° C	BDV65	125	Watts
			BDV65A		
			BDV65B		
			BDV65C		
		T _{mb} = 25° C	BDV65	3.5	
			BDV65A		
			BDV65B		
			BDV65C		
T _J	Junction Temperature	BDV65	150	°C	
		BDV65A			
		BDV65B			
		BDV65C			
T _s	Storage Temperature	BDV65	-65 to +150		
		BDV65A			
		BDV65B			
		BDV65C			

THERMAL CHARACTERISTICS

Symbol	Ratings		Value	Unit
R _{thj-c}	Thermal Resistance, Junction to Case	BDV65	1	°C / W
		BDV65A		
		BDV65B		
		BDV65C		
R _{thj-a}	Thermal Resistance, Junction to Ambient	BDV65	35.7	
		BDV65A		
		BDV65B		
		BDV65C		

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ELECTRICAL CHARACTERISTICS

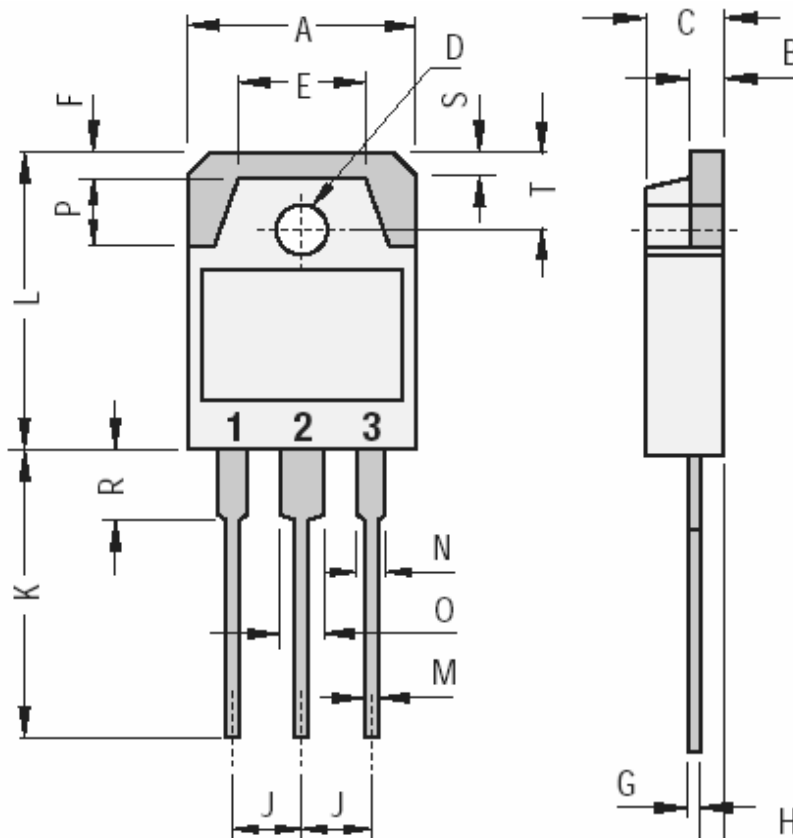
TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)		Min	Typ	Mx	Unit	
I_{CEO}	Collector Cutoff Current	$V_{CE}= 30\text{ V}, I_B= 0$	BDV65	-	-	2	mA	
		$V_{CE}= 40\text{ V}, I_B= 0$	BDV65A					
		$V_{CE}= 50\text{ V}, I_B= 0$	BDV65B					
		$V_{CE}= 60\text{ V}, I_B= 0$	BDV65C					
I_{EBO}	Emitter Cutoff Current	$V_{BE}= 5\text{ V}, I_C= 0$	BDV65	-	-	5	mA	
			BDV65A					
			BDV65B					
			BDV65C					
I_{CBO}	Collector Cutoff Current	$I_E= 0$ $T_j=25^\circ\text{C}$	$V_{CB}= 60\text{ V}$	BDV65	-	-	0.4	mA
			$V_{CB}= 80\text{ V}$	BDV65A				
			$V_{CB}= 100\text{ V}$	BDV65B				
			$V_{CB}= 120\text{ V}$	BDV65C				
		$I_E= 0$ $T_j=150^\circ\text{C}$	$V_{CB}= 30\text{ V}$	BDV65	-	-	2	
			$V_{CB}= 40\text{ V}$	BDV65A				
			$V_{CB}= 50\text{ V}$	BDV65B				
			$V_{CB}= 60\text{ V}$	BDV65C				
V_{CEO}	Collector-Emitter Breakdown Voltage (*)	$I_C= 30\text{ mA}, I_B= 0$	BDV65	60	-	-	V	
			BDV65A	80	-	-		
			BDV65B	100	-	-		
			BDV65C	120	-	-		
h_{FE}	DC Current Gain (*)	$V_{CE}= 4\text{ V}, I_C= 5\text{ A}$	BDV65	1000	-	-	-	
			BDV65A					
			BDV65B					
			BDV65C					
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C= 5\text{ A}, I_B= 20\text{ mA}$	BDV65	-	-	2	V	
			BDV65A					
			BDV65B					
			BDV65C					
V_{BE}	Base-Emitter Voltage(*)	$V_{CE}= 4\text{ V}, I_C= 5\text{ A}$	BDV65	-	-	2,5	V	
			BDV65A					
			BDV65B					
			BDV65C					

(*) Pulse Width $\approx 300\ \mu\text{s}$, Duty Cycle $\angle 1.5\%$

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MECHANICAL DATA CASE TO3PN Non Isolated Plastic Package



DIMENSIONS (mm)		
	Min.	Max.
A	15.20	1600
B	1.90	2.10
C	4.60	5.00
D	3.10	3.30
E		9.60
F		2.00
G	0.35	0.55
H		1.40
J	5.35	5.55
K	20.00	
L	19.60	20.20
M	0.95	1.25
N		2.00
O		3.00
P		4.00
R		4.00
S		1.80
T	4.80	5.20

Pin 1 :	Base
Pin 2 :	Collector
Pin 3 :	Emitter
Package	Collector

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