

BD675 SERIES**NPN SILICON
POWER DARLINGTON TRANSISTOR****TO-126 CASE**www.centrasemi.com**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR BD675 Series types are NPN Silicon Darlington Power Transistors, available in the plastic TO-126 package, and are designed for audio and video output applications.

MARKING: FULL PART NUMBER

		BD675	BD677	BD679			
MAXIMUM RATINGS: ($T_C=25^\circ\text{C}$)		BD675A	BD677A	BD679A	BD681	BD683	UNITS
Collector-Base Voltage	V_{CBO}	45	60	80	100	120	V
Collector-Emitter Voltage	V_{CEO}	45	60	80	100	120	V
Emitter-Base Voltage	V_{EBO}			5.0			V
Continuous Collector Current	I_C			4.0			A
Continuous Base Current	I_B			100			mA
Power Dissipation	P_D			40			W
Operating and Storage							
Junction Temperature	T_J, T_{stg}			-65 to +150			$^\circ\text{C}$
Thermal Resistance	Θ_{JC}			3.13			$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

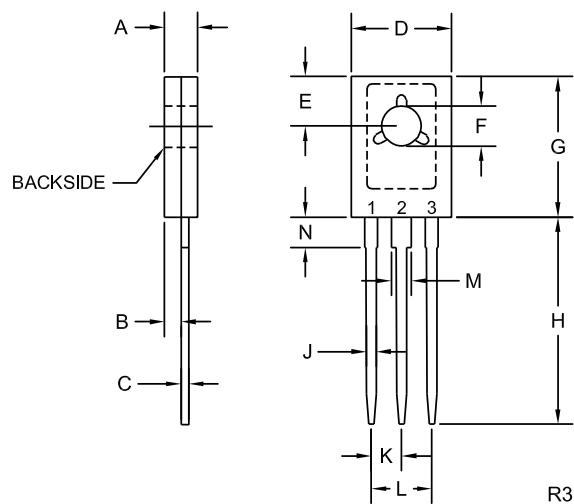
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=\text{Rated } V_{CBO}$		200	μA
I_{CBO}	$V_{CB}=\text{Rated } V_{CBO}, T_C=100^\circ\text{C}$		2.0	mA
I_{CEO}	$V_{CE}=\frac{1}{2}\text{Rated } V_{CEO}$		500	μA
I_{EBO}	$V_{EB}=5.0\text{V}$		2.0	mA
BV_{CEO}	$I_C=50\text{mA}$ (BD675, BD675A)	45		V
BV_{CEO}	$I_C=50\text{mA}$ (BD677, BD677A)	60		V
BV_{CEO}	$I_C=50\text{mA}$ (BD679, BD679A)	80		V
BV_{CEO}	$I_C=50\text{mA}$ (BD681)	100		V
BV_{CEO}	$I_C=50\text{mA}$ (BD683)	120		V
$V_{CE(SAT)}$	$I_C=1.5\text{A}, I_B=30\text{mA}$ (Non-A)		2.5	V
$V_{CE(SAT)}$	$I_C=2.0\text{A}, I_B=40\text{mA}$ (A)		2.8	V
$V_{BE(ON)}$	$V_{CE}=3.0\text{V}, I_C=1.5\text{A}$ (Non-A)		2.5	V
$V_{BE(ON)}$	$V_{CE}=3.0\text{V}, I_C=2.0\text{A}$ (A)		2.5	V
h_{FE}	$V_{CE}=3.0\text{V}, I_C=1.5\text{A}$ (Non-A)	750		
h_{FE}	$V_{CE}=3.0\text{V}, I_C=2.0\text{A}$ (A)	750		
h_{fe}	$V_{CE}=3.0\text{V}, I_C=1.5\text{A}, f=1.0\text{MHz}$	1.0		

R1 (14-June 2010)

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POWER DARLINGTON TRANSISTOR



TO-126 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Emitter
- 2) Collector
- 3) Base

MARKING:

FULL PART NUMBER

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.094	0.110	2.40	2.80
B	0.050		1.27	
C	0.015	0.030	0.38	0.75
D	0.291	0.335	7.40	8.50
E	0.148		3.75	
F	0.118	0.134	3.00	3.40
G	0.413	0.472	10.50	12.00
H	0.618		15.70	
J	0.024	0.035	0.62	0.90
K	0.089		2.25	
L	0.177		4.50	
M	0.045	0.055	1.14	1.40
N	0.083		2.10	

TO-126 (REV:R3)

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