

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors
www.centrasemi.com

BD675 SERIES

NPN SILICON
POWER DARLINGTON TRANSISTOR

TO-126 CASE

DESCRIPTION

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

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

	SYMBOL	BD675	BD677	BD679	BD681	BD683	UNITS
Collector-Base Voltage	V _{CB0}	60	80	100	120	140	V
Collector-Emitter Voltage	V _{CEO}	45	60	80	100	120	V
Emitter-Base Voltage	V _{EBO}	5	5	5	5	5	V
Collector Current	I _C			4			A
Peak Collector Current	I _{CM}			6			A
Base Current	I _B			100			mA
Power Dissipation	P _D			40			W
Operating and Storage							
Junction Temperature	T _J , T _{stg}			-65 to +150			°C
Thermal Resistance	θ _{JC}			3.12			°C/W
Thermal Resistance	θ _{JA}			100			°C/W

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I _{CBO}	V _{CB} =Rated V _{CB0}			0.2	mA
I _{CBO}	V _{CB} =½ Rated V _{CB0} , T _C =150°C			2.0	mA
I _{CEO}	V _{CE} =½ Rated V _{CEO}			0.5	mA
I _{EBO}	V _{EB} =5.0V			5.0	mA
BV _{CEO}	I _C =50mA			RATED V _{CEO}	V
V _{CE(SAT)}	I _C =1.5A, I _B =6.0mA (BD675; I _C =2.0A)			2.5	V
V _{BEON}	V _{CE} =3.0V, I _C =1.5A (BD675; I _C =2.0A)			2.5	V
h _{FE}	V _{CE} =3.0V, I _C =1.5A (BD675; I _C =2.0A)	750			
h _{fe}	V _{CE} =3.0V, I _C =1.5A, f=1.0MHz (BD675; I _C =2.0A)	10			
fh _{fe}	V _{CE} =3.0V, I _C =1.5A, (BD675; I _C =2.0A)		60		kHz

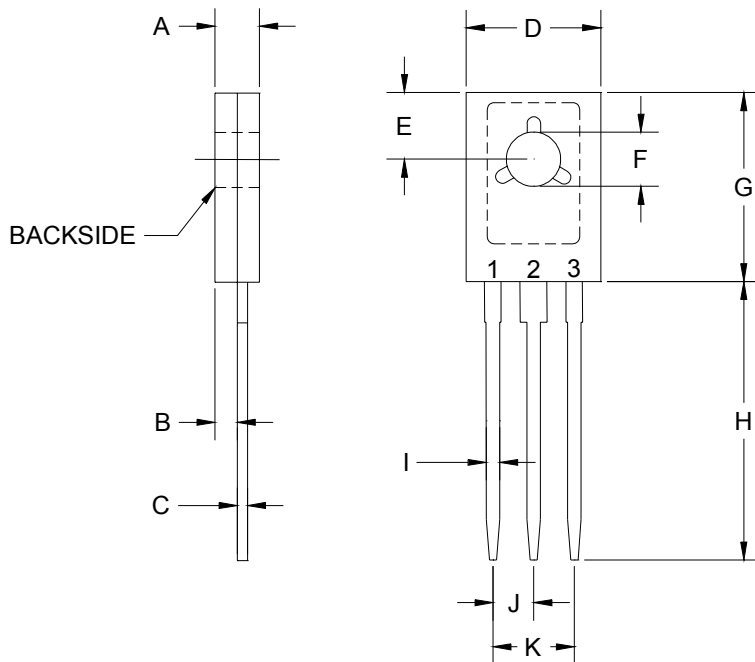
(SEE REVERSE SIDE)

R0

ELECTRICAL CHARACTERISTICS (CONTINUED)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{(SB)}$	$V_{CE}=50V, t_p=20ms$	0.8			A
$I_{(SB)}$	$V_{CE}=40V, t_p=20ms$ (BD675)	1.0			A
t_{on}	$I_{Con}=1.5A, I_{Bon}=-I_{Boff}=6mA, V_{CC}=30V$		0.8	2.0	μs
t_{off}	$I_{Con}=1.5A, I_{Bon}=-I_{Boff}=6mA, V_{CC}=30V$		4.5	8.0	μs

TO-126 PACKAGE - MECHANICAL OUTLINE



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.094	0.106	2.39	2.69
B	0.047		1.19	
C	0.019	0.029	0.48	0.74
D	0.295	0.307	7.49	7.80
E	0.149		3.78	
F	0.118	0.126	3.00	3.20
G	0.413	0.425	10.49	10.80
H	0.618		15.70	
I	0.027	0.035	0.69	0.89
J	0.087		2.21	
K	0.173		4.39	

TO-126 (REV:R1)

R1

Lead Code:

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

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