

BD561

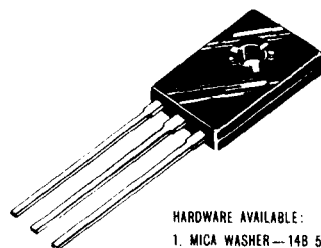
NPN SILICON MEDIUM-POWER TRANSISTOR

- Designed for 5 to 10W Audio Amplifiers
- BD561 is complementary to BD562
- P_D of 40W with T_j of 150°C
- Case 77 package is Pin compatible with SOT-9

**4 AMPERE
POWER TRANSISTOR
NPN SILICON
40 VOLTS
40 WATTS**

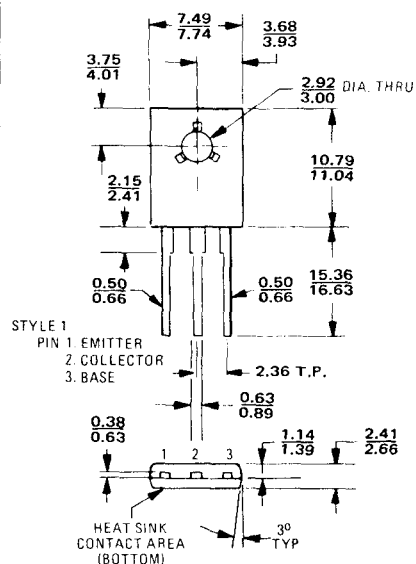
MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	40	Vdc
Collector-Base Voltage	V_{CBO}	45	Vdc
Emitter-Base Voltage	V_{EB0}	5	Vdc
Collector Current	I_C	4	Adc
Base Current	I_B	2	Adc
Total Device Dissipation $T_C = 25^\circ \text{C}$	P_D	40	Watts
Derate above 25°C		320	mW/ $^\circ \text{C}$
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +150	$^\circ \text{C}$



HARDWARE AVAILABLE:

1. MICA WASHER—14B 52 600 F03
2. LOCK WASHER—04A 52 200 F01



When mounting the device, torque not to exceed 0.07 m.kg.

If lead bending is required, use suitable clamps or other supports between transistor case and point of bend.

All dimensions in millimeters

CASE 77-03

THERMAL CHARACTERISTICS

	Symbol	Max.	Unit
Thermal Resistance, Junction to Case	θ_{JC}	3.12	°C/W

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

Characteristics	Symbol	Min.	Max.	Unit
Collector-Emitter Sustaining Voltage ($I_C = 0.1\text{ A}$, $I_B = 0$)	$V_{CEO(sus)}$	40	—	Vdc
Collector Cutoff Current ($V_{CB} = 45\text{ V}$, $I_E = 0$)	I_{CBO}	—	0.1	mAdc
Emitter Cutoff Current ($V_{BE} = 5.0\text{ V}$, $I_C = 0$)	I_{EBO}	—	0.1	mAdc
DC Current Gain ($I_C = 50\text{ mA}$, $V_{CE} = 1.0\text{ V}$) * ($I_C = 500\text{ mA}$, $V_{CE} = 1.0\text{ V}$) * ($I_C = 2.0\text{ A}$, $V_{CE} = 1.0\text{ V}$) *	h_{FE}	40 60 40	— — —	—
Collector-Emitter Saturation Voltage ($I_C = 1.0\text{ A}$, $I_B = 0.1\text{ A}$) *	$V_{CE(sat)}$	—	0.5	Vdc
Base-Emitter On Voltage ($I_C = 2.0\text{ A}$, $V_{CE} = 1.0\text{ V}$) *	$V_{BE(on)}$	—	1.2	Vdc

* Pulse Test: Pulse Width $\leq 300\text{ }\mu\text{s}$, Duty Cycle $\leq 2.0\%$

