



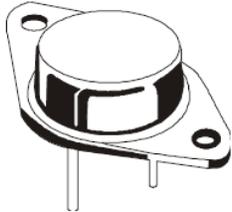
Continental Device India Pvt. Limited

An ISO/TS 16949, ISO 9001 and ISO 14001 Certified Company



NPN-POWER TRANSISTOR

BDY20
TO-3
Metal Can Package



ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	VALUE	UNITS
Collector-base voltage (open emitter)	V_{CBO}	100	V
Collector-base voltage (open base)	V_{CEO}	60	V
Collector-emitter voltage ($R_{BE}=100\Omega$)	V_{CER}	70	V
Emitter-base voltage (open collector)	V_{EBO}	7	V
Collector current	I_C	15	A
Base current	I_B	7	A
Total power dissipation up to $T_C=25^\circ\text{C}$	P_{tot}	115	W
Derate above 25°C		0.657	W/ $^\circ\text{C}$
Junction temperature	T_J	200	$^\circ\text{C}$
Storage temperature	T_{stg}	-65 to 200	$^\circ\text{C}$

THERMAL RESISTANCE

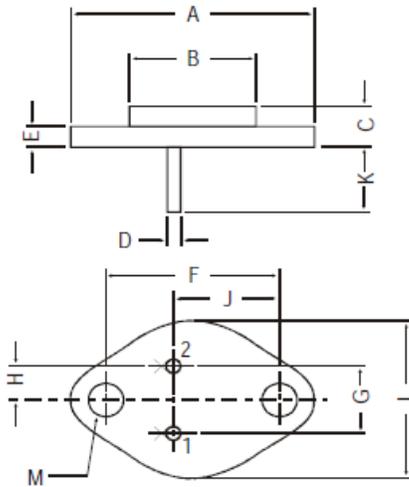
PARAMETER	SYMBOL	VALUE	UNITS
from junction to case	$R_{th\ J-C}$	1.52	$^\circ\text{C}/\text{W}$

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

PARAMETER	SYMBOL	TEST CONDITIONS	VALUE		UNITS
			MIN	MAX	
Collector-emitter cut-off current	I_{CEO}	$V_{CE}=30\text{V}, I_B=0$	-	0.7	mA
Collector cut-off current	I_{CEV}	$V_{CE}=100\text{V}, V_{BE(off)}=1.5\text{V}$	-	1	mA
		$V_{CE}=100\text{V}, V_{BE(off)}=1.5\text{V}, T_C=150^\circ\text{C}$	-	5	mA
Emitter cut-off current	I_{EBO}	$I_C=0, V_{EB}=7\text{V}$	-	5	mA
Collector -emitter sustaining voltage	$V_{CEO(sus)}^*$	$I_C=0.2\text{A}, I_B=0$	60	-	V
Collector-base voltage	V_{CBO}	$I_C=1\text{mA}, I_E=0$	100	-	V
Emitter-base voltage	V_{EBO}	$I_E=1\text{mA}, I_C=0$	7	-	V
Collector-emitter saturation voltage	V_{CEsat}^*	$I_C=4\text{A}, I_B=0.4\text{A}$	-	1.1	V
		$I_C=10\text{A}, I_B=3.3\text{A}$	-	3.0	V
Base emitter on voltage	$V_{BE(on)}^*$	$I_C=4\text{A}, V_{CE}=4\text{V}$	-	1.5	V
D.C. Current gain	h_{FE}^*	$I_C=4\text{A}, V_{CE}=4\text{V}$	20	70	
		$I_C=10\text{A}, V_{CE}=4\text{V}$	5	-	
Small signal current gain	h_{fe}	$I_C=1\text{A}, V_{CE}=4\text{V}, f=1\text{KHz}$	15	120	
Transition frequency	f_T	$I_C=0.5\text{A}, V_{CE}=10\text{V}, f=1\text{MHz}$	2.5	-	MHz

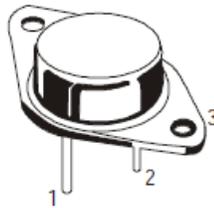
* Pulse test: pulse width $\leq 300\ \mu\text{s}$; duty cycle $\leq 2\%$

TO-3 Metal Can Package



DIM	MIN.	MAX.
A	—	39.37
B	—	22.22
C	6.35	8.50
D	0.96	1.09
E	—	1.77
F	29.90	30.40
G	10.69	11.18
H	5.20	5.72
J	16.64	17.15
K	11.15	12.25
L	—	26.67
M	3.84	4.19

All dimensions in mm.



PIN CONFIGURATION
 1. BASE
 2. EMITTER
 3. COLLECTOR

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-3	100 pcs/pkt	1.3 kg/100 pcs	12.5" x 8" x 1.8"	0.1K	17" x 11.5" x 21"	2K	27.5 kgs



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Customer Notes:

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

DISCLAIMER

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