

Continental Device India Limited



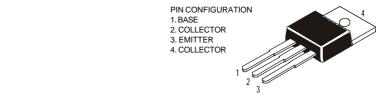


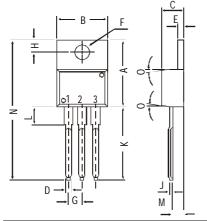


TO-220 Plastic Package

BD949, BD951, BD953, BD955 BD950, BD952, BD954, BD956

BD949, 951, 953, 955 NPN PLASTIC POWER TRANSISTORS BD950, 952, 954, 956 PNP PLASTIC POWER TRANSISTORS Power Amplifier and Switching Applications





	DIM	MIN.	MAX.		
	Α	14.42	16.51		
	В	9.63	10.67		
	С	3.56	4.83		
	D		0.90		
mmm.	Ε	1.15	1.40		
	F	3.75	3.88		
	G	2.29	2.79		
	Н	2.54	3.43		
	J		0.56		
	K	12.70	14.73		
2	L	2.80	4.07		
All diffilli Sioris	М	2.03	2.92		
	N		31.24		
Ē	0	DEG 7			

949 951 953 955

ABSOLUTE MAXIMUM RATINGS

			<i>949</i>	<i>951</i>	<i>953</i>	<i>955</i>		
			<i>950</i>	<i>952</i>	<i>954</i>	<i>956</i>		
Collector-base voltage (open emitter)	V_{CBO}	max.	<i>60</i>	<i>80</i>	100	<i>120</i>	V	
Collector-emitter voltage (open base)	$V_{C\!E\!O}$	max.	<i>60</i>	<i>80</i>	100	<i>120</i>	V	
Collector current	I_C	max.		5.	0		\boldsymbol{A}	
Total power dissipation up to $T_{mb} = 25^{\circ}C$	P_{tot}	max.		4	0		W	
Junction temperature	T_{j}	max.		15	50		${}^{\circ}\!C$	
Collector-emitter saturation voltage	3							
$I_C = 2 A; I_B = 0.2 A$	V_{CEsat}	max.		1.	0		V	
D.C. current gain								
$I_C = 2 A; V_{CE} = 4 V$	h_{FE}	min.		2	0			

RATINGS (at T_A =25°C unless otherwise specified) Limiting values

		<i>950</i>	<i>952</i>	<i>954</i>	<i>956</i>	
Collector-base voltage (open emitter)	V_{CBO}	max. 60	<i>80</i>	100	120	V
Collector-emitter voltage (open base)	V_{CEO}	max. 60	<i>80</i>	100	120	V
Emitter-base voltage (open collector)	V_{EBO}	max.	5.0			V
Collector current	I_C	max.	5.	.0		\boldsymbol{A}

BD949, BD951, BD953, BD955 BD950, BD952, BD954, BD956

Collector current (Po Total power dissipa Junction temperature Storage temperature	tion upto T_{mb} =25°C	I_{CM} P_{tot} T_j T_{stg}	max. max. max.	8.0 40 150 -65 to +150			$egin{array}{c} A & & & & \\ W & & & & \\ {}^{\mathcal{C}} & & & {}^{\mathcal{C}} & & \end{array}$	
THERMAL RESISTANCE From junction to ambient From junction to mounting base		R _{th j-a} R _{th j-mb}		70 3.12			K/W K/W	
CHARACTERISTIC $T_{amb} = 25^{\circ}C \text{ unless}$	CS otherwise specified		949 950	951 952	953 954	955 956		
Collector cutoff curi	rent							
$I_E = 0$; $V_{CB} = V$	CBO	I_{CBO}	max.	5	0		μA	
	V_{CBO} ; $T_j = 150^{\circ}C$	I_{CBO}	max.	1.0			mA	
$I_B = 0; V_{CE} = \frac{1}{2}$	V_{CEO}	I_{CEO}	max.	0.	. 1		mA	
Emitter cut-off curr	ent							
$IC = 0$; $V_{EB} = 5$	V	I_{EBO}	max.	0.2		mA		
Breakdown voltages								
$I_C = 1 \text{ mA; } I_B =$	· 0	$V_{C\!E\!O}$	min. 60	<i>80</i>	100	120	V	
$I_C = 1 \text{ mA; } I_E =$	· 0	V_{CBO}	min. 60	<i>80</i>	100	120	V	
$I_E = 1 \text{ mA}; I_C = 0$		V_{EBO}	min.	5.	.0		V	
Saturation voltage								
$I_C = 2 A$; $I_B = 0.2 A$		V_{CEsat}^*	max.	1.	.0		V	
Base emitter on voltage								
$I_C = 2 A$; $V_{CE} = 4 V$		$V_{BE(on)}^*$	max.	1.	.4		V	
D.C. current gain		(-)						
$I_C = 0.5 \text{ A}; V_{CE} = 4 \text{ V}$		$h_{\!F\!E}^*$	min.	40				
-		h_{FF}^*	min.	20				
$I_C = 2 A; V_{CE} = 4 V$		IIFE	111111.	٤	U			
Transition frequency $I_C = 0.5 A$; $V_{CE} = 4 V$; $f = 1 MHz$		f_T	min.		3		MHz	
IC = 0.3 A, VCE	r = 4 V, I = I IVIIIZ	TT	111111.	,)		MITIZ	
Switching time $V_{CC} = 20 \text{ V; } I_{C}$ $I_{con} = 1A; I_{Bon}$ $R_{L} = 20\Omega$								
Turn on time	NPN .	t_{on}	typ.	0.	.3		μs	
Turn off time	NPN	t_{off}	typ.		.5		μs	
	PNP	t _{on}	typ.		.1		μs	
	PNP	t_{off}	typ.		.4		μs	
	= = ==	-011	Jr.		-		r	

^{*} Measured under pulse conditions: $t_p \le 300 \mu s$; duty cycle $\le 2\%$

Notes

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished on the CDIL Web Site/CD is believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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