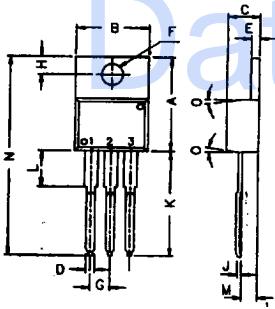
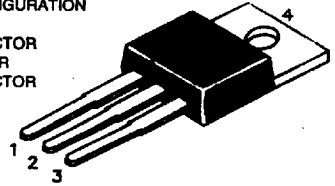


BD241, 241A, 241B, 241C NPN PLASTIC POWER TRANSISTORS
BD242, 242A, 242B, 242C PNP PLASTIC POWER TRANSISTORS
General Purpose Amplifier and Switching Applications

PIN CONFIGURATION
1. BASE
2. COLLECTOR
3. EMITTER
4. COLLECTOR



ALL DIMENSIONS ARE IN M.M.

DIM	MIN	MAX
A	14,42	16,51
B	9,63	10,67
C	3,56	4,83
D	-	0,90
E	1,15	1,40
F	3,75	3,88
G	2,29	2,79
H	2,54	3,43
J	-	0,56
K	12,70	14,73
L	-	6,35
M	2,03	2,92
N	-	31,24
O	7	DEG

ABSOLUTE MAXIMUM RATINGS

		241	241A	241B	241C	242	242A	242B	242C
Collector-emitter voltage ($V_{BE} = 0$)	V_{CES}	max. 55	70	90	115				
Collector-emitter voltage (open base)	V_{CEO}	max. 45	60	80	100				
Collector current	I_C	max.		5.0					A
Total power dissipation up to $T_C = 25^\circ C$	P_{tot}	max.		40					W
Junction temperature	T_j	max.		150					$^\circ C$
Collector-emitter saturation voltage $I_C = 3 A; I_B = 0.6 A$	V_{CEsat}	max.		1.2					V
D.C. current gain $I_C = 1 A; V_{CE} = 4 V$	h_{FE}	min.		25					

RATINGS (at $T_A = 25^\circ C$ unless otherwise specified)

Limiting values

		241	241A	241B	241C	242	242A	242B	242C
Collector-emitter voltage ($V_{BE} = 0$)	V_{CES}	max. 55	70	90	115				
Collector-emitter voltage (open base)	V_{CEO}	max. 45	60	80	100				
Collector-emitter voltage ($R_{BE} = 100\Omega$)	V_{CER}	max. 55	70	90	115				

Emitter-base voltage (open collector)	V_{EBO}	max.	5.0	V
Collector current	I_C	max.	3.0	A
Collector current (Peak value)	I_C	max.	5.0	A
Base current	I_B	max.	1.0	A
Total power dissipation upto $T_C=25^\circ\text{C}$	P_{tot}	max.	40	W
Derate above 25°C		max.	0.32	W/ $^\circ\text{C}$
Junction temperature	T_j	max.	150	$^\circ\text{C}$
Storage temperature	T_{stg}		-65 to +150	$^\circ\text{C}$

THERMAL RESISTANCE

From junction to case	$R_{th\ j-c}$		3.125	$^\circ\text{C}/\text{W}$
From junction to ambient	$R_{th\ j-a}$		62.5	$^\circ\text{C}/\text{W}$

CHARACTERISTICS

$T_{amb} = 25^\circ\text{C}$ unless otherwise specified

			241	241A	241B	241C	
			242	242A	242B	242C	
Collector cutoff current							
$I_B = 0; V_{CE} = 30\text{ V}$	I_{CEO}	max.	0.3	0.3	-	-	mA
$I_B = 0; V_{CE} = 60\text{ V}$	I_{CEO}	max.	-	-	0.3	0.3	mA
$V_{BE} = 0; V_{CE} = V_{CEO}$	I_{CES}	max.			0.2		mA
Emitter cut-off current							
$I_C = 0; V_{EB} = 5\text{ V}$	I_{EBO}	max.			1.0		mA
Breakdown voltages							
$I_C = 30\text{ mA}; I_B = 0$	$V_{CEO(sus)}^*$	min.	45	60	80	100	V
$I_C = 1\text{ mA}; V_{BE} = 0$	V_{CES}	min.	55	70	90	115	V
$I_E = 1\text{ mA}; I_C = 0$	V_{EBO}	min.			5.0		V
Saturation voltage							
$I_C = 3\text{ A}; I_B = 0.6\text{ A}$	V_{CEsat}^*	max.			1.2		V
Base emitter on voltage							
$I_C = 3\text{ A}; V_{CE} = 4\text{ V}$	$V_{BE(on)}^*$	max.			1.8		V
D.C. current gain							
$I_C = 1\text{ A}; V_{CE} = 4\text{ V}$	h_{FE}^*	min.			25		
$I_C = 3\text{ A}; V_{CE} = 4\text{ V}$	h_{FE}^*	min.			10		
Transition frequency							
$I_C = 0.5\text{ A}; V_{CE} = 10\text{ V}; f = 1\text{ MHz}$	$f_T(1)$	min.			3		MHz
Small signal current gain							
$I_C = 0.5\text{ A}; V_{CE} = 10\text{ V}; f = 1\text{ KHz}$	h_{fe}	min.			20		

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

(1) $f_T = |h_{fe}| \cdot f_{test}$