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SPC-F005.DWG

REVISIONS

DOC. NO. SPC-F005 * Effective: 7/8/02 * DCP No: 1398

DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
1447	A	RELEASED	HO	1/21/04	SF	8/18/04	JC	8/24/04
1885	B	UPDATED TO ROHS COMPLIANCE	EO	02/03/06	HO	2/6/06	HO	2/6/06

Description: PLASTIC, PNP, TO-220 POWER TRANSISTOR General purpose amplifier and switching applications.

Features:

- Collector Emitter Saturation Voltage $I_C = 3A$, $I_B = .6A$, $V_{CE} = 1.2V$ (Max)
- D.C. Current Gain $I_C = 1A$, $V_{CE} = 4V$, $h_{FE} = 25$ (Min)

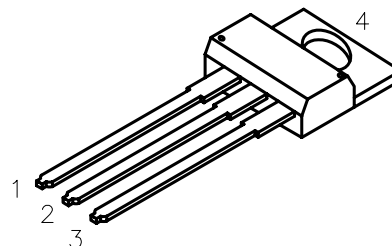
Absolute Maximum Ratings:

- Collector-Base Voltage, $V_{CES} = 115V$
- Collector-Emitter Voltage, $V_{CEO} = 100V$
- Emitter-Base Voltage, $V_{EBO} = 5V$
- Continuous Collector Current, $I_C = 3A$
- Base Current, $I_B = 1A$
- Total Device Dissipation ($T_C = +25^\circ C$), $P_D = 40W$
Derate above $25^\circ C = 0.32mW/^\circ C$
- Operating Junction Temperature Range, $T_J = -65^\circ$ to $+150^\circ C$
- Storage Temperature Range, $T_{stg} = -65^\circ$ to $+150^\circ C$



Pin Configuration:

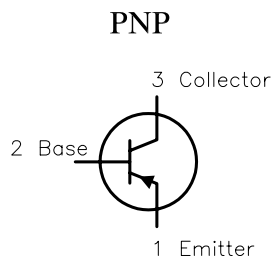
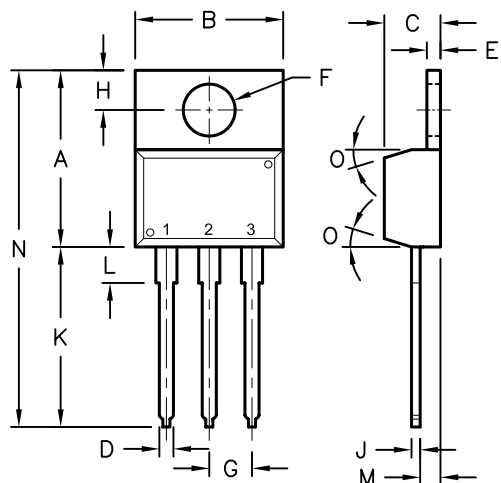
- Base
- Collector
- Emitter
- Collector



Electrical Characteristics: ($T_A = +25^\circ C$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Max	Unit
OFF Characteristics					
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 30mA$, $I_B = 0$, Note 1	100	—	V
Collector-Base Breakdown Voltage	$V_{(BR)CES}$	$I_C = 1mA$, $V_{BE} = 0$	115	—	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 1mA$, $I_C = 0$	5	—	V
Collector Cut-Off Current	I_{CES}	$V_{CE} = 100V$, $V_{BE} = 0$	—	0.2	mA
	I_{CEO}	$V_{CB} = 60V$, $I_B = 0$	—	0.3	mA
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = 5V$, $I_C = 0$	—	1	mA
ON Characteristics					
DC Current Gain, Note 1	h_{FE}	$V_{CE} = 4V$, $I_C = 1A$	25	—	—
		$V_{CE} = 4V$, $I_C = 3A$	10	—	—
Collector-Emitter Saturation Voltage, Note 1	$V_{CE(sat)}$	$I_C = 3A$, $I_B = 0.6A$	—	1.2	V
Base-Emitter On Voltage, Note 1	$V_{BE(on)}$	$I_C = 3A$, $V_{CE} = 4V$	—	1.8	V
Small-Signal Characteristics					
Current Gain-Bandwidth Product	f_T	$V_{CE} = 10V$, $I_C = 0.5A$, $f = 1MHz$	3	—	MHz
Small-Signal Current Gain	h_{fe}	$V_{CE} = 10V$, $I_C = 0.5A$, $f = 1kHz$	20	—	—

Note 1: Pulse test: Pulse width $\leq 300\mu s$, Duty cycle $\leq 2\%$.



Dimensions	A	B	C	D	E	F	G	H	J	K	L	M	N	O
Max.	16.51	10.67	4.83	0.90	1.40	3.88	2.79	3.43	0.56	14.73	4.07	2.92	31.24	
Min.	14.42	9.63	3.65	—	1.15	3.75	2.29	2.54	—	12.70	2.80	2.03	—	7°

DISCLAIMER:
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TOLERANCES:

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

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DATE:

1/21/04

DATE:

8/18/04

DATE:

8/24/04

DRAWING TITLE:

Transistor, Power, Plastic, TO-220, PNP

SIZE

A

DWG. NO.

BD242C

ELECTRONIC FILE

01H0323.DWG

REV

B

SCALE:

NTS

U.O.M.: Millimeters

SHEET:

1 OF 1