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SPC-F005.DWG

REVISIONS

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

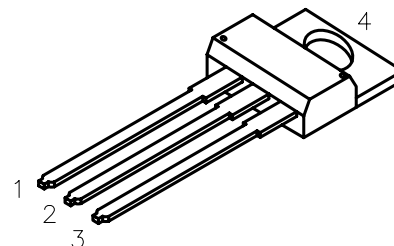
DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
1447	A	RELEASED	HO	2/16/04	JW	4/1/04	JC	4/27/04
1885	B	UPDATE TO ROHS COMPLIANT	EO	02/04/06	HO	2/6/06	HO	2/6/06

Description: A silicon PNP transistor in a standard TO-220 type package designed for use in general purpose amplifier and switching applications.



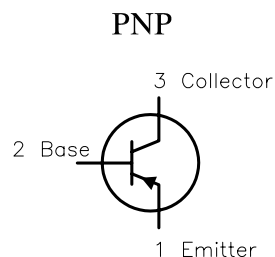
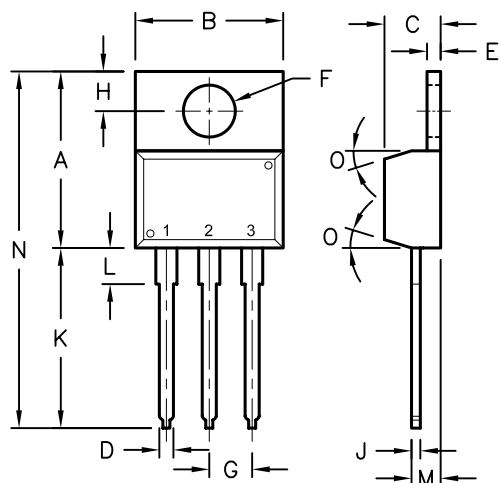
Absolute Maximum Ratings:

- Collector-Base Voltage, $V_{CB} = 45V$
- Collector-Emitter Voltage, $V_{CEO} = 45V$
- Emitter-Base Voltage, $V_{EB} = 5V$
- Collector Current, I_C
Continuous = 4A
- Base Current, $I_B = 1A$
- Collector Power Dissipation ($T_C = +25^\circ C$), $P_D = 40W$
Derate above $+25^\circ C = 0.32W/^\circ C$
- Operating Junction Temperature Range, $T_J = -65^\circ$ to $+150^\circ C$
- Storage Temperature Range, $T_{stg} = -65^\circ$ to $+150^\circ C$
- Thermal Resistance, Junction-to-Case, $R_{thJC} = 3.125^\circ C/W$



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 Sustaining Voltage	$V_{CEO(sus)}$	$I_C = 100mA$, $I_B = 0$, Note 1	45	—	V
Collector Cutoff Current	I_{CEO}	$V_{CE} = 45V$, $I_B = 0$	—	1	mA
		$V_{CE} = 45V$, $V_{EB(off)} = 1.5V$	—	0.1	mA
		$V_{CE} = 45V$, $V_{EB(off)} = 1.5V$, $T_C = +125^\circ C$	—	2	mA
Emitter Cutoff Current	I_{EBO}	$V_{BE} = 5V$, $I_C = 0$	—	1	mA
ON Characteristics (Note 1)					
DC Current Gain	h_{FE}	$V_{CE} = 2V$, $I_C = 1.5A$	25	100	
		$V_{CE} = 2V$, $I_C = 4A$	10	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 4A$, $I_B = 1A$	—	1.4	V
Base-Emitter ON Voltage	$V_{BE(on)}$	$V_{CE} = 2V$, $I_C = 1.5A$	—	1.2	V
Dynamic Characteristics					
Current Gain-Bandwidth Product	f_T	$V_{CE} = 4V$, $I_C = 0.1A$, $f = 1MHz$	2.5	—	MHz
Small-Signal Current Gain	h_{fe}	$V_{CE} = 2V$, $I_C = 0.1A$, $f = 1kHz$	25	—	

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
Min.	14.42	9.63	3.65	—	1.15	3.75	2.29	2.54	—	12.70	2.80	2.03	—	7
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	

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TOLERANCES:

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

DRAWN BY:

HISHAM ODISH

DATE:

2/16/04

CHECKED BY:

JEFF MCVICKER

DATE:

4/1/04

APPROVED BY:

JOHN COLE

DATE:

4/27/04

DRAWING TITLE:

Transistor, General Purpose, Bipolar, Plastic, TO-220, PNP

SIZE

A

DWG. NO.

2N6124

ELECTRONIC FILE

35C0737.DWG

REV

B

SCALE: NTS

U.O.M.: Millimeters

SHEET: 1 OF 1