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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	3/24/06	SF	8/12/04	JC	8/16/04
1885	B	UPDATED TO ROHS COMPLIANCE	EO	02/03/06	HO	2/6/06	HO	2/6/06

Description: Plastic NPN TO-220 Power Transistor. General purpose amplifier and switching applications.

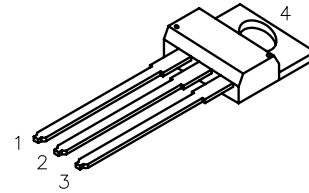


Features:

- Collector-Emitter Saturation Voltage $I_C = 6A$, $I_B = 1A$, $V_{CE} = 1.5V$ (Max)
- D.C. Current Gain $I_C = 0.3A$, $V_{CE} = 4V$ $h_{FE} 30$ (Min)

Absolute Maximum Ratings:

- Collector-Base Voltage, $V_{CBO} = 100V$
- Collector-Emitter Voltage, $V_{CEO} = 100V$
- Emitter-Base Voltage, $V_{EBO} = 5V$
- Continuous Collector Current, $I_C = 6A$
- Base Current, $I_B = 2A$
- Total Device Dissipation ($T_C = +25^\circ C$), $P_D = 65W$
- Operating Junction Temperature Range, $T_J = -65^\circ$ to $+150^\circ C$
- Storage Temperature Range, $T_{stg} = -65^\circ$ to $+150^\circ C$



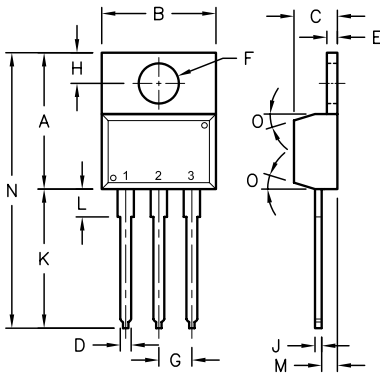
Pin Configuration:

1. Base
2. Collector
3. Emitter
4. Collector

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

Parameter	Symbol	Test Conditions	Min	Max	Unit
OFF Characteristics					
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 30mA$, $I_B = 0$, Not 1	100	-	V
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 1mA$, $I_E = 0$	100	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 1mA$, $I_C = 0$	5	-	V
Collector Cut-Off Current	I_{CES}	$V_{CE} = 100V$, $V_{BE} = 0$	-	0.4	mA
	I_{CEO}	$V_{CB} = 60V$, $I_B = 0$	-	0.7	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = 5V$, $I_C = 0$	-	1	mA
ON Characteristics, Note 1					
DC Current Gain	h_{FE}	$V_{CE} = 4V$, $I_C = 0.3A$,	30	-	-
		$V_{CE} = 4V$, $I_C = 3A$	15	-	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 6A$, $I_B = 1A$,	-	1.5	V
Base-Emitter On Voltage	$V_{BE(on)}$	$I_C = 6A$, $V_{CE} = 4V$,	-	2	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
Min.	14.42	9.63	3.56	-	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.

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CHECKED BY:	DATE:
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APPROVED BY:	DATE:
JOHN COLE	8/16/04

DRAWING TITLE:			
Transistor, Power, Plastic, TO-220, NPN			
SIZE	DWG. NO.	ELECTRONIC FILE	REV
A	BD243C	01H0326.DWG	B
SCALE:	NTS	U.O.M.: Millimeters	SHEET: 1 OF 1