multicomp

SPC-F005.DWG

REVISIONS

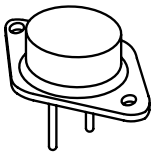
DOC. NO. SPC-F005 • Effective: 7/8/02 • DCP No: 1398

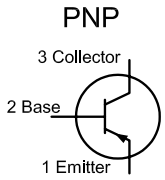
DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
1447	A	RELEASED	HO	9/21/04	SF	9/22/04	JC	9/24/04
1885	B	UPDATED TO ROHS COMPLIANCE	EO	02/03/06	HO	2/6/06	HO	2/6/06

Description: This is a silicon PNP transistor in a TO-3 type package designed for general purpose switching and amplifier applications.

RoHS Compliant

Features:
- DC Current Gain: h_{FE} = 20 ~ 70 @ I_C = 4A
- Collector-Emitter Saturation Voltage: $V_{CE(sat)}$ = 1.1V Max @ I_C = 4A
- Excellent Safe Operating Area

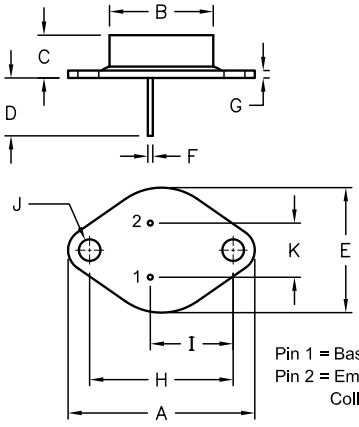




Absolute Maximum Ratings:
- Collector-Base Voltage, V_{CBO} = 100V
- Collector-Emitter Voltage, V_{CEO} = 60V
- Emitter-Base Voltage, V_{EBO} = 7V
- Continuous Collector Current, I_C = 15A
- Base Current, I_B = 7A
- Total Device Dissipation (T_C = +25°C), P_D = 115W
  Derate above 25°C = 0.657W/°C
- Operating Junction Temperature Range, T_J = −65° to +200°C
- Storage Temperature Range, T_{stg} = −65° to +200°C

Electrical Characteristics: (T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Max	Unit
OFF Characteristics					
Collector-Emitter Breakdown Voltage (Note 1)	$V_{(BR)CEO}$	I_C = 200mA, I_B = 0, Note 1	60	–	V
	$V_{CER(sus)}$	I_C = 200mA, R_{BE} = 100 Ohm, Note 1	70	–	V
Collector Cut-Off Current	I_{CEX}	V_{CE} = 100V, $V_{BE(off)}$ = 1.5V	–	1	mA
		V_{CE} = 100V, $V_{BE(off)}$ = 1.5V, T_C = +150°C	–	5	mA
	I_{CEO}	V_{CE} = 30V, I_B = 0	–	0.7	mA
Emitter Cut-Off Current	I_{EBO}	V_{BE} = 7V, I_C = 0	–	5	mA
ON Characteristics					
DC Current Gain (Note 1)	h_{FE}	V_{CE} = 4V, I_C = 4A	20	70	–
		V_{CE} = 4V, I_C = 10A	5	–	–
Collector-Emitter Saturation Voltage (Note 1)	$V_{CE(sat)}$	I_C = 4A, I_B = 400mA	–	1.1	V
		I_C = 10A, I_B = 3.3A	–	3	V
Base-Emitter ON Voltage (Note 1)	$V_{BE(on)}$	V_{CE} = 4V, I_C = 4A	–	1.5	V
Small-Signal Characteristics					
Current Gain-Bandwidth Product (Note 2)	f_T	V_{CE} = 4V, I_C = 1A,	800	–	kHz
Small-Signal Current Gain	h_{fe}	V_{CE} = 4V, I_C = 1A, f = 1kHz	15	120	–



DIM	MIN	MAX
A	38.75	39.96
B	19.28	22.23
C	7.96	9.28
D	11.18	12.19
E	25.20	26.67
F	0.92	1.09
G	1.38	1.62
H	29.90	30.40
I	16.64	17.30
J	3.88	4.36
K	10.67	11.18

Note 1. Pulse Test: Pulse Width ≦ 300μs, Duty Cycle ≦ 2%.
Note 2. f_T is defined as the frequency at which $|h_{fe}|$ extrapolates to unity.

TOLERANCES:
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

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APPROVED BY:	DATE:
JOHN COLE	9/24/04

DRAWING TITLE: Transistor, Silicon, TO-3, PNP

SIZE	DWG. NO.	ELECTRONIC FILE	REV
A	MJ2955	01H0847.DWG	B

SCALE: NTS | U.O.M.: Millimeters | SHEET: 1 OF 1