multicomp

SPC-F005.DWG

REVISIONS

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

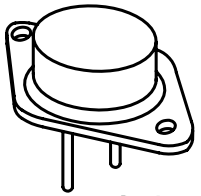
DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
1885	A	RELEASED	BYF	02/03/06	HO	2/6/06	JWM	2/6/06

RoHS Compliant

Description:
High Power PNP, TO-3, Silicon Transistor. Designed for industrial military power amplifier and switching circuit applications.

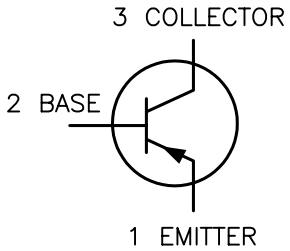
Features:
- Low Collector Saturation Voltage: $V_{CE(sat)}$ 1V (Max) I_C = 10A
- High Collector Emitter Sustaining Voltage: V_{CEO} = 120V (Min)

Absolute Maximum Ratings:
- Collector-Base Voltage, V_{CBO} = 140V
- Collector-Emitter Voltage, V_{CEO} = 120V
- Emitter-Base Voltage, V_{EBO} = 6V
- Continuous Collector Current, I_C = 25A
- Base Current, I_B = 10A
- Total Device Dissipation (T_C = +25°C), P_D = 200W
  Derate above 25°C = 1.14mW/°C
- Operating Junction Temperature Range, T_J = −65°C to +200°C
- Storage Temperature Range, T_{stg} = −65°C to +200°C

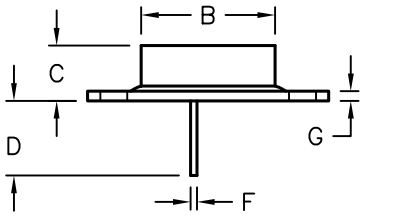


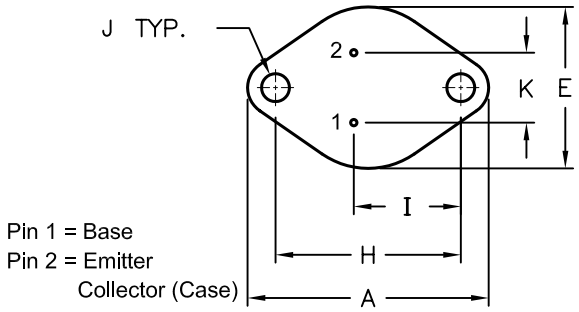
TO-3

PNP



DIM	MIN	MAX
A	38.75	39.96
B	19.28	22.23
C	7.96	9.23
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





TOLERANCES:

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

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

SIZE	DWG. NO.	ELECTRONIC FILE	REV
A	2N6438	01H1391.DWG	A

SCALE: NTS | U.O.M.: MILLIMETERS | SHEET: 1 OF 2

Electrical Characteristics: (T_C= +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 = 50mA, I_B = 0	120	–	V
Collector Cut–Off Current	I_{CEX}	V_{CE} = 130V, $V_{EB(off)}$ = 1.5V	–	10	µA
	I_{CBO}	V_{CB} = 140V, I_E = 0	–	10	µA
	I_{CEO}	V_{CB} = 60V, I_B = 0	–	50	µA
Emitter Cut–Off Current	I_{EBO}	V_{EB} = 6V, I_C = 0	–	100	µA
ON Characteristics					
DC Current Gain (Note 1)	h_{FE}	V_{CE} = 2V, I_C= 0.5A	30	–	–
		V_{CE} = 2V, I_C = 10A	20	80	–
		V_{CE} = 2V, I_C = 25A	12	–	–
Collector–Emitter Saturation Voltage (Note 1)	$V_{CE(sat)}$	I_C = 10A, I_B = 1A	–	1	V
		I_C = 25A, I_B = 2.5A	–	1.8	V
Base–Emitter Saturation Voltage (Note 1)	$V_{BE(sat)}$	I_C = 10A, I_B = 1A	–	1.8	V
		I_C = 25A, I_B = 2.5A	–	2.5	V
Small-Signal Characteristics					
Current Gain–Bandwidth Product	f_T	V_{CE} = 10V, I_C = 1A, f = 10MHz	40	–	MH_Z
Output Capacitance	C_{obo}	V_{CB} = 10V, I_E = 0, f = 100kHz	–	700	P_F
Switching Characteristics					
Rise Time	t_r	V_{CC} = 80V, I_C = 10A, $V_{BE(off)}$ = 6V, I_{B1} = 1A	–	0.3	µA
Storage Time	t_s	V_{CC} = 80V, I_C = 10A, $V_{BE(off)}$ = 6V I_{B1} = I_{B2} = 1A	–	1	µA
Fall Time	t_f		–	0.25	µA

Note 1. Pulse Test: Pulse Width ≦ 300µs, Duty Cycle ≦ 2%.