multicomp

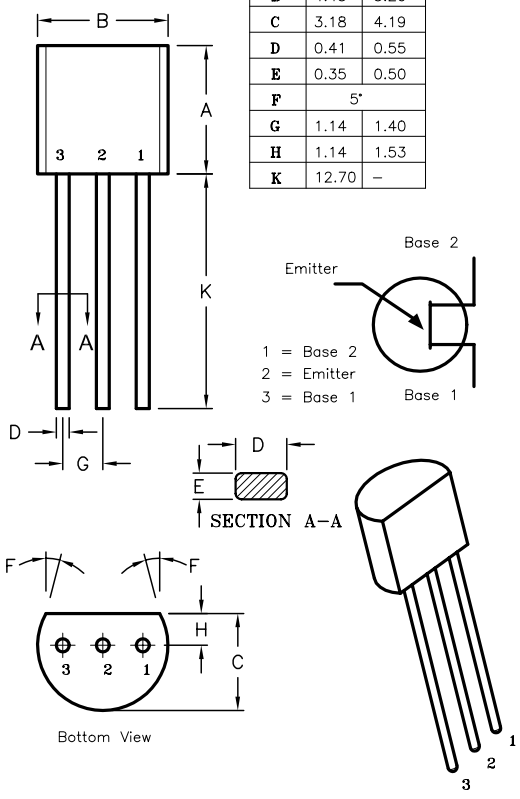
SPC-F005.DWG

REVISIONS

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

DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
1262	A	RELEASED	HO	8/5/02	JWM	8/5/02	DJC	8/5/02

TO-92



DIM.	MIN.	MAX.
A	4.32	5.33
B	4.45	5.20
C	3.18	4.19
D	0.41	0.55
E	0.35	0.50
F	5°	
G	1.14	1.40
H	1.14	1.53
K	12.70	–

Description

A PN unijunction transistor in a TO-92 type package designed for use in pulse and timing circuits, sensing circuits and thyristor trigger circuits

Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

- Power Dissipation, P_D: 300mW

  Derate Above 25°C: 3.0mW/°C
- RMS Emitter Current, $I_{E(RMS)}$: 50mA
- Peak Pulse Emitter Current (Note 1) Current, i_E: 1.5A
- Emitter Reverse Voltage, V_{B2E}: 30V
- Interbase Voltage, V_{B2B1}: 35V
- Operating Junction Temperature Range, T_J: −65°C ~ +125°C
- Storage Temperature Range, T_{stg}: −65°C ~ +150°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Intrinsic Standoff Ratio		V_{B2B1} = 10V, Note 3	0.56	–	0.75	–
Interbase Resistance	r_{BB}		4.0	6.0	9.1	k Ohms
Interbase Resistance Temperature Coefficient			0.1	–	0.9	%/°C
Emitter Saturation Voltage	$V_{EB1(sat)}$	V_{B2B1} = 10V, I_E = 50mA, Note 4	–	2.5	–	V
Modulated Interbase Current	$I_{B2(mod)}$	V_{B2B1} = 10V, I_E = 50mA	–	15	–	mA
Emitter Reverse Current	I_{EB20}	V_{B2E} = 30V, I_{B1} = 0	–	0.005	1.0	µA
Peak Point Emitter Current	I_P	V_{B2B1} = 25V	–	1	5	µA
Valley Point Current	I_V	V_{B2B1} = 20V, R_{B2} = 100 Ohms, Note 4	2	5	–	mA
Base-One Peak Pulse Voltage	V_{OB1}		3	6	–	V

Notes:

1. Duty Cycle ≦1%, PRR = 10PPS.
2. Based upon power dissipation at T_A= +25°C.
3. Intrinsic standoff ratio is essentially constant with temperature and interbase voltage and is defined by the equation:

   $$V_P - V_{BB} + V_D$$

   where: V_P = Peak Point Emitter Voltage; V_{BB} = Interbase Voltage; V_D = Junction Diode Drop (~0.5V)
4. Use pulse techniques: Pulse Width ~ 300µS, Duty Cycle ≦ 2% to avoid internal heating due to interbase modulation which may result in erroneous readings.

TOLERANCES:

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

DRAWN BY:	DATE:
HISHAM ODISH	8/5/02
CHECKED BY:	DATE:
JEFF MCVICKER	8/5/02
APPROVED BY:	DATE:
DANIEL CAREY	8/5/02

DRAWING TITLE: UNIJUNCTION TRANSISTOR, TO-92, PN

SIZE	DWG. NO.	ELECTRONIC FILE	REV
A	2N4870	35C0717.DWG	A

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