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SPC-F005.DWG

## REVISIONS

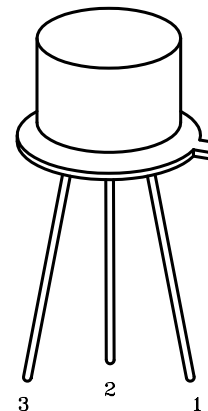
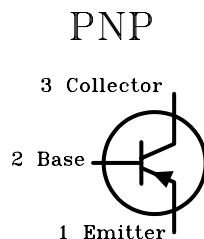
DOC. NO. SPC-F005 \* Effective: 7/8/02 \* DCP No: 1398

DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
1262	A	RELEASED	HO	2/4/03	JWM	2/4/03	JC	2/4/03
1885	B	UPDATED TO ROHS COMPLIANT	EO	02/03/06	HO	2/6/06	HO	2/6/06

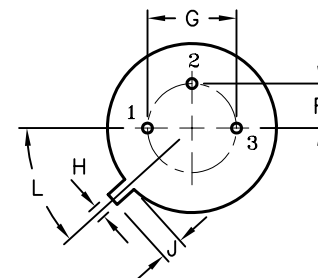
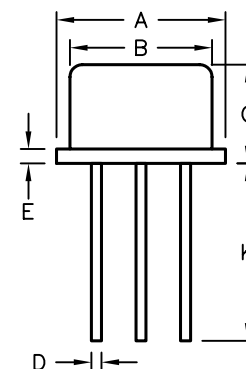


### Absolute Maximum Ratings:

- Collector-Emitter Voltage,  $V_{CE0} = 50V$
- Collector-Base Voltage,  $V_{CBO} = 75V$
- Emitter-Base Voltage,  $V_{EBO} = 5V$
- Continuous Collector Current,  $I_C = 2A$
- Base Current,  $I_B = 1A$
- Total Power Dissipation ( $T_C = +25^\circ C$ ),  $P_D = 10W$   
Derate Above  $25^\circ C = 0.057W/^\circ C$
- Operating Junction Temperature Range,  $T_J = -65^\circ$  to  $+200^\circ C$
- Storage Temperature Range,  $T_{stg} = -65^\circ$  to  $+200^\circ C$
- Thermal Resistance, Junction-to-Case,  $R_{thJC} = 17.5^\circ C/W$



1. EMITTER  
2. BASE  
3. Collector



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

Parameter	Symbol	Test Conditions	Min	Max	Unit
<b>OFF Characteristics</b>					
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 100mA$ , $I_B = 0$ (Note 1)	50	—	V
Collector Cutoff Current	$I_{CEX}$	$V_{CE} = 75V$ , $V_{BE} = 1.5V$	—	0.1	mA
		$V_{CE} = 45V$ , $V_{BE} = 1.5V$ , $T_C = +150^\circ C$	—	5.0	mA
Emitter Cutoff Current	$I_{EBO}$	$V_{BE} = 5V$ , $I_C = 0$	—	0.1	mA
<b>ON Characteristics (Note 1)</b>					
DC Current Gain	$h_{FE}$	$I_C = 500mA$ , $V_{CE} = 4V$	40	250	—
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 500mA$ , $I_B = 50mA$	—	1.2	V
Base-Emitter ON Voltage	$V_{BE(on)}$	$I_C = 500mA$ , $V_{CE} = 4V$	—	1.4	V
<b>Small-Signal Characteristics</b>					
Small-Signal Current Gain	$h_{fe}$	$I_C = 50mA$ , $V_{CE} = 4V$ , $f = 10MHz$	5.0	—	—
<b>Switching Characteristics</b>					
Turn-On Time	$t_{on}$	$V_{CC} = 30V$ , $I_C = 500mA$ , $I_{B1} = 50mA$	—	100	ns
Turn-Off Time	$t_{off}$	$V_{CC} = 30V$ , $I_C = 500mA$ , $I_{B1} = I_{B2} = 50mA$	—	1000	ns

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
Min.	8.50	7.74	6.09	0.40	—	2.41	4.82	0.71	0.73	12.70	45°
Max.	9.39	8.50	6.60	0.53	0.88	2.66	5.33	0.86	1.02	—	48°

DISCLAIMER:  
ALL STATEMENTS AND TECHNICAL INFORMATION CONTAINED HEREIN ARE BASED UPON INFORMATION AND/OR TESTS WE BELIEVE TO BE ACCURATE AND RELIABLE. SINCE CONDITIONS OF USE ARE BEYOND OUR CONTROL, THE USER SHALL DETERMINE THE SUITABILITY OF THE PRODUCT FOR THE INTENDED USE AND ASSUME ALL RISK AND LIABILITY WHATSOEVER IN CONNECTION THEREWITH.

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

DRAWN BY:	DATE:
HISHAM ODISH	2/4/03
CHECKED BY:	DATE:
JEFF MCVICKER	2/4/03
APPROVED BY:	DATE:
JOHN COLE	2/4/03

DRAWING TITLE:  
Transistor, Silicon, TO-39, PNP, General Purpose

SIZE	DWG. NO.	ELECTRONIC FILE	REV
A	2N5323	35C0723.DWG	B
SCALE:	NTS	U.O.M.: Millimeters	SHEET: 1 OF 1