

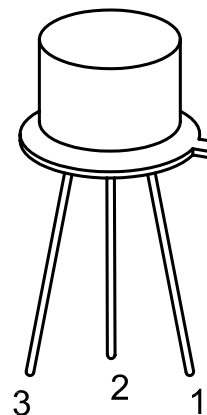
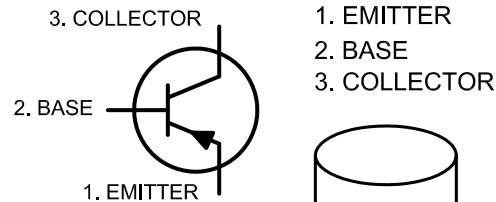
DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
1262	A	RELEASED	HO	3/26/03	JWM	3/26/03	DJC	3/26/03
1885	B	UPDATED TO ROHS COMPLIANCE	EO	02/03/06	HO	2/6/06	HO	2/6/06

**Description:**

A silicon PNP transistor in a TO-39 type case designed primarily for amplifier and switching applications. This device features high breakdown voltage, low leakage current, low capacity, and beta useful over an extremely wide current range.

**Absolute Maximum Ratings:**

- Collector-Base Voltage,  $V_{CB0} = 60V$
- Collector-Emitter Voltage,  $V_{CEO} = 60V$
- Emitter-Base Voltage,  $V_{EBO} = 5V$
- Continuous Collector Current,  $I_C = 0.6A$
- Total Device Dissipation ( $T_A = +25^\circ C$ ),  $P_D = 0.6W$   
Derate above  $25^\circ C = 3.43mW/^\circ C$
- Total Device Dissipation ( $T_C = +25^\circ C$ ),  $P_D = 3W$   
Derate above  $25^\circ C = 17.2mW/^\circ C$
- Operating Junction Temperature Range,  $T_J = -65^\circ$  to  $+200^\circ C$
- Storage Temperature Range,  $T_{stg} = -65^\circ$  to  $+200^\circ C$
- Lead Temperature (During Soldering,  $\frac{1}{16}$ " from case, 60sec max),  $T_L = 300^\circ C$


**PNP**

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

Parameter	Symbol	Test Conditions	Min	Max	Unit
-----------	--------	-----------------	-----	-----	------

**OFF Characteristics**

Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10mA, I_B = 0$	60	-	V
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 10\mu A, I_E = 0$	60	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 10\mu A, I_C = 0$	5	-	V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB} = 50V, I_E = 0$	-	10	nA
		$V_{CB} = 50V, I_E = 0, T_A = +150^\circ C$	-	10	$\mu A$
Emitter Cut-Off Current	$I_{EBO}$	$V_{BE} = 5V, I_C = 0$	-	10	$\mu A$

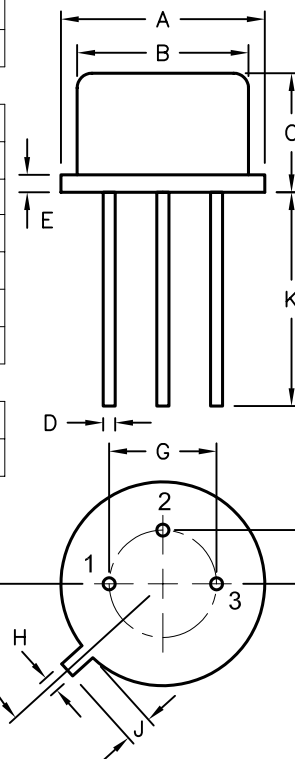
**ON Characteristics (Note 1)**

DC Current Gain	$h_{FE}$	$V_{CE} = 10V, I_C = 100\mu A$	75	-	-
		$V_{CE} = 10V, I_C = 150mA$	100	300	-
		$V_{CE} = 10V, I_C = 500mA$	50	-	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 150mA, I_B = 15mA$	-	0.4	V
		$I_C = 500mA, I_B = 50mA$	-	1.6	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 150mA, I_B = 15mA$	-	1.3	V
Base-Emitter ON Voltage	$V_{BE(on)}$	$V_{CE} = 500mV, I_C = 500mA$	-	2.6	V

**Small-Signal Characteristics**

Output Capacitance	$C_{obo}$	$V_{CE} = 10V, f = 1MHz$	-	8	pF
Input Capacitance	$C_{ibo}$	$V_{EB} = 2V, f = 1MHz$	-	30	pF

Note 1. Pulse Test: Pulse Width  $\leq 300\mu s$ , Duty Cycle  $\leq 1\%$ .



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	42°
Max.	9.39	8.50	6.60	0.53	0.88	2.66	5.33	0.86	1.02	-	48°

SPC-F004.DWG

TOLERANCES: UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.	DRAWN BY:	DATE:	DRAWING TITLE:			
	HISHAM ODISH	3/26/03	Transistor, Bipolar, Amplifier & Switching, PNP, TO-39			
	CHECKED BY:	DATE:	SIZE	DWG. NO.	ELECTRONIC FILE	REV
	JEFF MCVICKER	3/26/03	A	2N2905A	35C0695.DWG	B
	APPROVED BY:	DATE:	SCALE: NTS		U.O.M.: Millimeters	
DANIEL CAREY	3/26/03			SHEET: 1 OF 1		

ALL RIGHTS RESERVED. NO PORTION OF THIS PUBLICATION, WHETHER IN WHOLE OR IN PART CAN BE REPRODUCED WITHOUT THE EXPRESS WRITTEN CONSENT OF SPC TECHNOLOGY. 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.