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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
1885	A	RELEASED	BYF	02/03/06	HO	2/6/06	JWM	2/6/06

**Description:** Plastic, PNP, Silicon Power Transistor in A TO-126 PK Designed for low power audio amplifier and low current, high speed switching

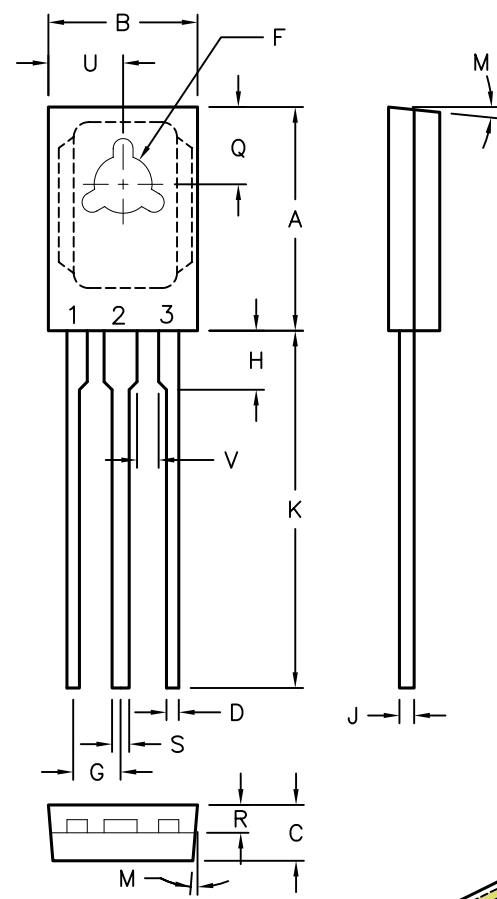
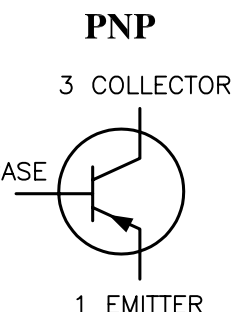
**Absolute Maximum Ratings:**

- Collector-Base Voltage,  $V_{CBO} = 100V$
- Collector-Emitter Voltage,  $V_{CEO} = 80V$
- Emitter-Base Voltage,  $V_{EBO} = 7V$
- Continuous Collector Current,  $I_C = 3A$
- Base Current,  $I_B = 1 A$
- Total Device Dissipation ( $T_C = +25^\circ C$ ),  $P_D = 1.5W$   
Derate above  $25^\circ C = 0.012W/^\circ C$
- Operating Junction Temperature Range,  $T_J = -65^\circ C$  to  $+150^\circ C$
- Storage Temperature Range,  $T_{stg} = -65^\circ C$  to  $+150^\circ C$

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

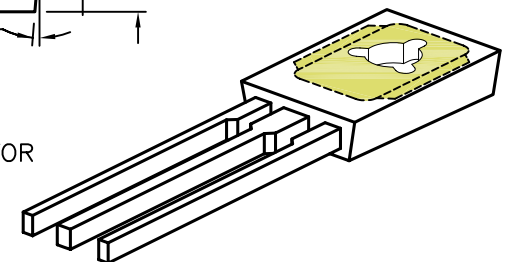
Parameter	Symbol	Test Conditions	Min	Max	Unit
<b>OFF Characteristics</b>					
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10mA, I_B = 0$	80	-	V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB} = 100V, I_E = 0$	-	0.1	$\mu A$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB} = 7V, I_C = 0$	-	0.1	$\mu A$
<b>ON Characteristics</b>					
DC Current Gain	$h_{FE}$	$V_{CE} = 1V, I_C = 100 mA$	50	250	-
		$V_{CE} = 1V, I_C = 500 mA$	30	-	-
		$V_{CE} = 1V, I_C = 1.5A$	12	-	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 500mA, I_B = 50mA$	-	0.3	V
		$I_C = 1.5A, I_B = 150mA$	-	0.9	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 1.5A, I_B = 150mA$	-	1.7	V
		$I_C = 3A, I_B = 600MA$	-	1.5	V
Base-Emitter On Voltage	$V_{BE(on)}$	$I_C = 500mA, V_{CE} = 1V$	-	2	V
<b>Small-Signal Characteristics</b>					
Current Gain-Bandwidth Product (Note 1)	$f_T$	$V_{CE} = 10V, I_C = 100mA, f = 10MHz$	50	-	MHz
Output Capacitance	$C_{obo}$	$V_{CB} = 10V, I_E = 0, f = .1MHz$	-	60	pF

Note 1,  $f_T = h_{FE} f_{TEST}$



Dim	Min	Max
A	10.80	11.05
B	7.49	7.75
C	2.41	2.67
D	0.51	0.66
F	2.92	3.18
G	2.31	2.46
H	1.27	2.41
J	0.38	0.64
K	15.11	16.64
M	3° TYP	
Q	3.76	4.01
R	1.14	1.40
S	0.64	0.89
U	3.68	3.94
V	1.02	-

STYLE 1  
PIN 1. EMITTER  
2. COLLECTOR  
3. BASE



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.

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DRAWING TITLE: Low Power Transistor, Silicon, Plastic, TO-126PK, PNP			
SIZE	DWG. NO.	ELECTRONIC FILE	REV
A	MJE172	01H0844.DWG	A
SCALE: NTS	U.O.M.: MILLIMETERS	SHEET: 1 OF 1	