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SPC--F005.DWG

REVISIONS

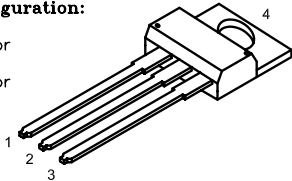
DOC. NO. SPC-F005 * Effective: 7/8/02 * DCP No: 1398

DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
1262	A	RELEASED	HO	10/11/02	JWM	10/11/02	DJC	10/11/02
1885	B	UPDATED TO ROHS COMPLIANCE	EO	02/03/06	HO	2/6/06	HO	2/6/06

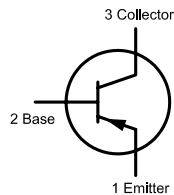
Description: A medium power silicon PNP transistor in a TO220 type package designed for switching and amplifier applications. This device is especially designed for series and shunt regulators and as a driver and output stage of high-fidelity amplifiers.

Pin Configuration:

1. Base
2. Collector
3. Emitter
4. Collector



PNP

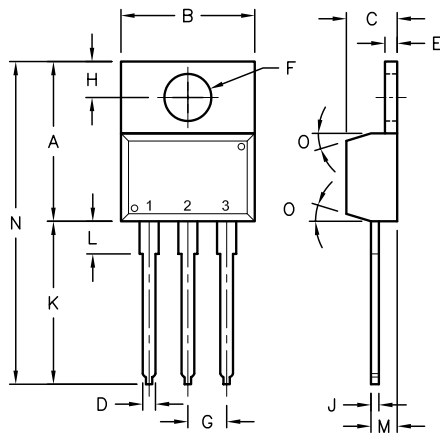


FEATURES:

- Low Saturation Voltage

Absolute Maximum Ratings:

- Collector-Base Voltage, $V_{CBO} = 100V$
- Collector-Emitter Voltage, $V_{CEO} = 100V$
- Emitter-Base Voltage, $V_{EBO} = 5V$
- Continuous Collector Current = 1A
- Continuous Base Current = 0.4A
- Total Device Dissipation ($T_C = +25^\circ C$), $P_D = 30W$
Derate Linearly Above $25^\circ C = 0.24W/^\circ C$
- Total Device Dissipation ($T_A = +25^\circ C$), $P_D = 2W$
Derate Linearly Above $25^\circ C = 0.016W/^\circ C$
- Operating Junction Temperature Range, $T_{opr} = -65^\circ C \sim 150^\circ C$
- Storage Temperature Range, $T_{stg} = -65^\circ C \sim 150^\circ C$
- Lead Temperature (During Soldering, 1/8" (3.17mm) from case, 10sec max), $T_L = +235^\circ C$
- Thermal Resistance, Junction-to-Case, $R_{thJC} = 4.167^\circ C/W$
- Thermal Resistance, Junction-to-Ambient, $R_{thJA} = 62.5^\circ C/W$



Dim	Min.	Max.
A	14.42	16.51
B	9.63	10.67
C	3.56	4.83
D	-	0.90
E	1.15	1.40
F	3.75	3.88
G	2.29	2.79
H	2.54	3.43
J	-	0.56
K	12.70	14.73
L	2.80	4.07
M	2.03	2.92
N	-	31.24
O	-	7°

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

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
Collector Cutoff Current	I_{CEO}	$V_{CE}=60V, I_B=0$	-	0.3	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=-5V, I_C=0$	-	1	mA
Collector-Emitter Saturation Voltage	$V_{CE(sus)}$	$I_C=30mA, I_B=0$, Note 1	100	-	V
DC Current Gain	h_{FE}	$I_C=0.2A, V_{CE}=4V$, Note 1	40	-	-
		$I_C=1A, V_{CE}=4V$, Note 1	15	75	-
Base-Emitter Voltage	$V_{BE(on)}$	$I_C=1A, V_{CE}=4V$, Note 1	-	1.3	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1A, I_B=125mA$, Note 1	-	0.7	V
Small Signal Forward Current Transfer Ratio	h_{fe}	$V_{CE}=10V, I_C=200mA, f=1kHz$	20	-	-
Gain Bandwidth Product	f_T	$V_{CE}=10V, I_C=200mA, f=1MHz$	3	-	MHz

Note 1: Pulsed Duration = 300µs, Duty Factor = 0.018

Caution: The sustaining voltage ($V_{CE(sus)}$) **MUST NOT** be measured on a curve tracer

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TOLERANCES:

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

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DRAWING TITLE:

Transistor, TO-220, PNP, Silicon, Bipolar

SIZE	DWG. NO.	ELECTRONIC FILE	REV
A	TIP30C	35C0640.DWG	B
SCALE: NTS	U.O.M.: Millimeters	SHEET: 1 OF 1	