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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
1447	A	RELEASED	HO	5/19/03	JWM	5/20/03	DJC	5/20/03
1885	B	UPDATE TO ROHS COMPLIANT	EO	02/04/06	HO	2/6/06	HO	2/6/06

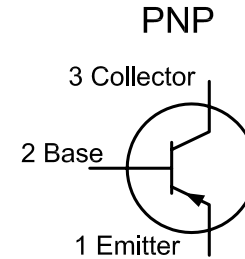
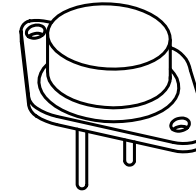
Description: A silicon PNP Darlington transistors in a TO-3 type case designed for general-purpose amplifier and low-frequency applications.

Features:

- High DC Current Gain
- Collector-Emitter Sustaining Voltage: $V_{CE(sus)} = 100V$ Min @ 100mA
- Monolithic Construction with Built-in Base-Emitter Shunt Resistors

Absolute Maximum Ratings:

- Collector-Emitter Voltage, $V_{CEO} = 100V$
- Collector-Base Voltage, $V_{CB} = 100V$
- Emitter-Base Voltage, $V_{EB} = 5V$
- Collector Current, I_C
 - Continuous = 12A
 - Peak = 20A
- Base Current, $I_B = 200mA$
- Total Power Dissipation ($T_C = +25^\circ C$), $P_D = 150W$
 - Derate above $25^\circ C = 0.857W/^\circ C$
- 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, $R_{thJC} = 1.17^\circ C/W$

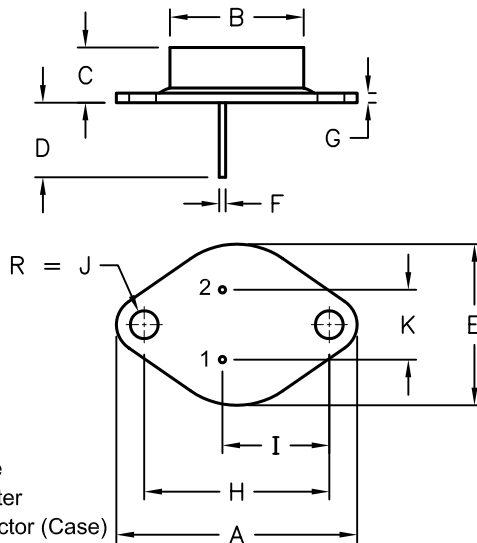


Electrical Characteristics: ($T_A = +25^\circ C$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Max	Unit
OFF Characteristics					
Collector-Emitter Sustaining Voltage	$V_{CE(sus)}$	$I_C = 100mA, I_B = 0$, Note 1	100	-	V
Collector Cut-Off Current	I_{CEO}	$V_{CE} = 50V, I_B = 0$	-	1	mA
		$V_{CE} = 100V, V_{BE(off)} = 1.5V$	-	0.5	mA
		$V_{CE} = 100V, V_{BE(off)} = 1.5V, T_c = +150^\circ C$	-	5	mA
Emitter Cut-Off Current	I_{EBO}	$V_{BE} = 5V, I_C = 0$	-	2	mA
ON Characteristics (Note 1)					
DC Current Gain	h_{FE}	$V_{CE} = 3V, I_C = 6A$	750	18000	-
		$V_{CE} = 3V, I_C = 12A$	100	-	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 6A, I_B = 24mA$	-	2	V
		$I_C = 12A, I_B = 120mA$	-	3	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 12A, I_B = 120mA$	-	4	V
Base-Emitter ON Voltage	$V_{BE(on)}$	$V_{CE} = 3V, I_C = 6A$	-	2.8	V
Dynamic Characteristics					
Small-Signal Current Gain	h_{fe}	$V_{CE} = 3V, I_C = 5A, f = 1kHz$	300	-	-
Magnitude of Common Emmitter Small-Signal Short-Circuit Forward Current Transfer Ratio	$ h_{fe} $	$V_{CE} = 3V, I_C = 5A, f = 1MHz$	4	-	MHz
Output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 0.1MHz$	-	500	pF

Note 1. Pulse test: Pulse Width = 300μs, Duty Cycle = 2%.

DIM	MIN	MAX
A	38.75	39.96
B	19.28	22.23
C	7.96	9.28
D	11.18	12.19
E	25.20	26.67
F	0.92	1.09
G	1.38	1.62
H	29.90	30.40
I	16.64	17.30
J	3.88	4.36
K	10.67	11.18



Pin 1 = Base
Pin 2 = Emitter
Collector (Case)

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: Transistor, Bipolar, TO-3, PNP, 12 A, 100 V, 150 W			
SIZE	DWG. NO.	ELECTRONIC FILE	REV
A	2N6052	35C0735.DWG	B
SCALE: NTS		U.O.M.: Millimeters	SHEET: 1 OF 1