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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
1975	A	RELEASED	JN	05/02/08	JN	05/02/08	JN	05/02/08

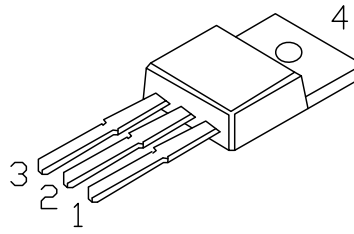
Features:

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



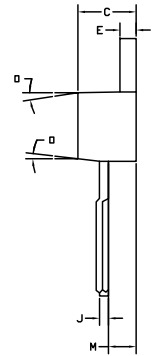
Absolute Maximum Ratings:

Collector-Emitter Voltage, V_{CE}	100V
Collector-Base Voltage, V_{CB}	100V
Emitter-Base Voltage, V_{EB}	5V
Collector Current, I_C	8A
Continuous	16A
Peak	
Base Current, I_B	120mA
Total Power Dissipation ($T_J = +25^\circ C$), P_D	75W
Derate above $+25^\circ C$	6W/ $^\circ C$
Total Power Dissipation ($T_J = +25^\circ C$), P_D	
Derate above $+25^\circ C$	2.2W
Derate above $+25^\circ C$	0.175W/ $^\circ C$
Operating Junction Temperature Range, T_J	-65° to +150 $^\circ C$
Storage Temperature Range, T_{stg}	-65° to +150 $^\circ C$
Thermal Resistance, Junction-to-Case, $R_{\theta JC}$	1.67 $^\circ C/W$
Thermal Resistance, Junction-to-Ambient (Note 1), $R_{\theta JA}$	57 $^\circ C/W$



PIN CONFIGURATION

1. BASE
2. COLLECTOR
3. EMITTER
4. COLLECTOR

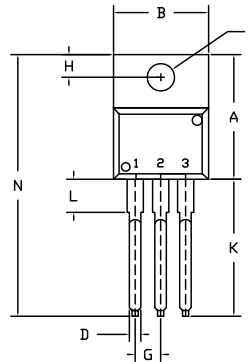


Electrical Characteristics: ($T_J = +25^\circ C$ unless otherwise specified)

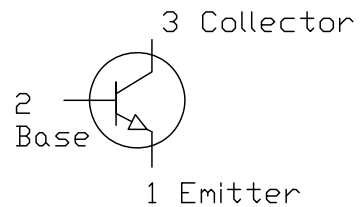
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF Characteristics						
Collector-Emitter Sustaining Voltage	$V_{CE(sat)}$	$I_C = 100mA, I_B = 0, \text{Note 2}$	100	-	-	V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 50V, I_B = 0$	-	-	20	μA
	I_{EBO}	$V_{EB} = 5V, I_C = 0$	-	-	0.02	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$	-	-	2	mA
ON Characteristics (Note 2)						
DC Current Gain	β_{DC}	$V_{CE} = 4V, I_C = 3A, I_B = 12mA$	-	-	-	
		$V_{CE} = 4V, I_C = 8A, I_B = 80mA$	-	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 3A, I_B = 12mA$	-	-	2	V
		$I_C = 8A, I_B = 80mA$	-	-	4	V
Base-Emitter ON Voltage	$V_{BE(ON)}$	$V_{CE} = 4V, I_C = 4A$	-	-	2.8	V
Dynamic Characteristics						
Small-Signal Current Gain	β_{d}	$V_{CE} = 4V, I_C = 3A, f = 1MHz$	4	-	-	
Output Capacitance	C_{ob}	$V_{CE} = 10V, I_C = 0, f = 1MHz$	-	-	200	pF

Note 1. $I_C = 1A, L = 100mH, P.R.F. = 10Hz, V_{CE} = 20V, R_{\theta JA} = 100 \text{ Ohm}$.
 Note 2. Pulse test: Pulse Width $< 300\mu s$, Duty Cycle $< 2\%$.

Dim	Min	Max
A	14.42	16.51
B	9.63	10.67
C	3.56	4.83
D	---	0.9
E	1.15	1.4
F	3.75	3.88
G	2.29	2.79
H	2.54	3.43
J	---	0.56
K	12.7	14.73
L	2.8	4.07
M	2.03	2.92
N	---	31.24
O	---	DEF 7



NPN



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TOLERANCES:

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

DRAWN BY:	DATE:
Jason Nash	05/02/08
CHECKED BY:	DATE:
Jason Nash	05/02/08
APPROVED BY:	DATE:
Jason Nash	05/02/08

DRAWING TITLE:			
A Silicon NPN Darlington transistors			
SIZE	DWG. NO.	ELECTRONIC FILE	REV
A	2N6045	35C0734.DWG	A
SCALE: NTS	U.O.M.: MILLIMETERS	SHEET: 1 OF 1	