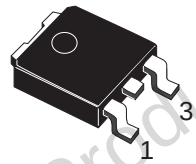
STD826

PNP MEDIUM POWER TRANSISTOR

Features

- SURFACE MOUNTING DEVICE IN MEDIUM POWER DPAK PACKAGE
- AVAILABLE IN TAPE & REEL PACKING
- IN COMPLIANCE WITH THE 2002/93/EC EUROPEAN DIRECTIVE

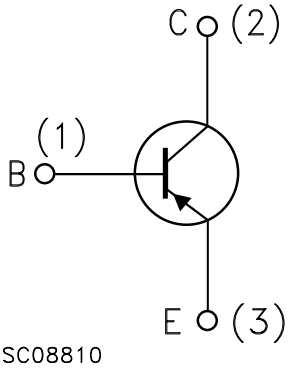


DPAK

Applications

- VOLTAGE REGULATION
- RELAY DRIVER
- GENERIC SWITCH

Internal Schematic Diagram



Description

The STD826 is PNP transistor manufactured using planar Technology resulting in rugged high performance devices.

Obsolete Product(s) - Obsolete Product(s)

Order codes

Part Number	Marking	Package	Packing
STD826T4	D826	DPAK	Tape & reel

1 Absolute Maximum Ratings

Table 1. Absolute Maximum Rating

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage (I_E = 0)	-60	V
V_{CEO}	Collector-Emitter Voltage (I_B = 0)	-30	V
V_{EBO}	Collector-Base Voltage (I_C = 0)	-5	V
I_C	Collector Current	-3	A
I_{CM}	Collector Peak Current (t_P < 5ms)	-6	A
I_B	Base Current	-1	A
I_{BM}	Base Peak Current (t_P < 5ms)	-2	A
P_{TOT}	Total dissipation at T_c = 25°C	15	W
T_{STG}	Storage Temperature	-65 to 150	°C
T_J	Max. Operating Junction Temperature	150	°C

Table 2. Thermal Data

Symbol	Parameter		Value	Unit
$R_{thJ\text{-}case}$	Thermal Resistance Junction-Case	Max	8.33	°C/W

Obsolete Product(s) - Obsolete Product(s)

2 Electrical Characteristics

Table 3. Electrical Characteristics (T_{CASE} = 25°C; unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CES}	Collector Cut-off Current (V_{BE} = 0)	V_{CE} = -60V			-10	µA
I_{CEO}	Collector Cut-off Current (I_B = 0)	V_{CE} = -30V			-100	µA
I_{EBO}	Emitter Cut-off Current (I_C = 0)	V_{EB} = -5V			-10	µA
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I_E = 0)	I_C = -100µA	-60			V
$V_{(BR)CEO}$ *Note: 1*	Collector-Emitter Breakdown Voltage (I_B = 0)	I_C = -10 mA	-30			V
$V_{(BR)EBO}$	Collector-Emitter Breakdown Voltage (I_C = 0)	I_E = -100 µA	-5			V
$V_{CE(sat)}$ *Note: 1*	Collector-Emitter Saturation Voltage	I_C = -1 A, I_B = -50 mA I_C = -2 A, I_B = -100 mA I_C = -3 A, I_B = -150 mA			-0.4 -0.7 -1.1	V V V
$V_{BE(sat)}$ *Note: 1*	Base-Emitter Saturation Voltage	I_C = -2 A, I_B = -100 mA			-1.2	V
h_{FE}	DC Current Gain	I_C = -100 mA, V_{CE} = -2 V I_C = -1 A, V_{CE} = -2 V I_C = -3 A, V_{CE} = -2 V	100 80 30		300	
f_T	Transistor Frequency	V_{CE} = -10 V, I_c = - 0.1 A		100		MHz

Note: 1 Pulsed duration = 300 µs, duty cycle ≤1.5%.

Obsolete Product(s) - Obsolete Product(s)

2.1 Electrical characteristics (curve)

Figure 1. DC Current Gain

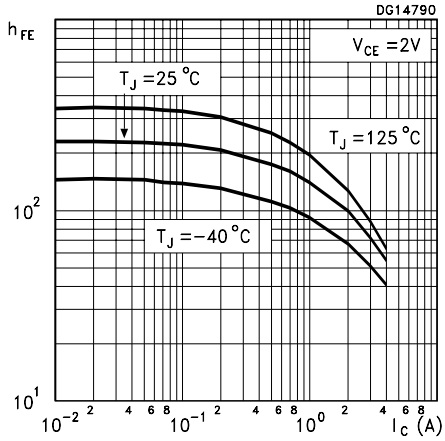


Figure 2. DC Current Gain

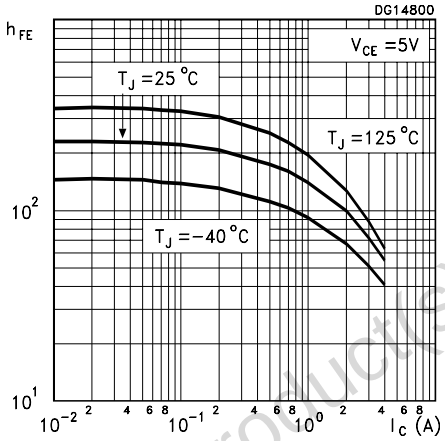


Figure 3. Collector-emitter saturation voltage

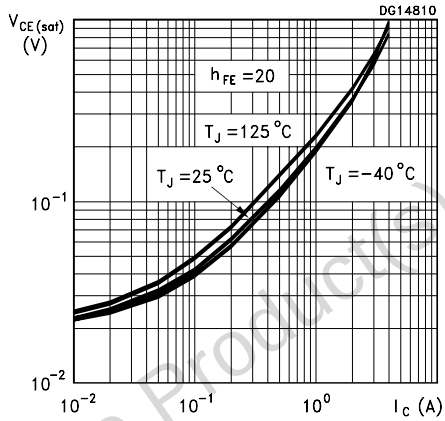


Figure 4. Base-emitter saturation voltage

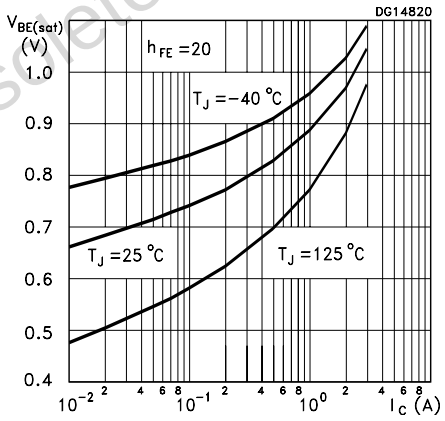


Figure 5. Switching times on resistive load

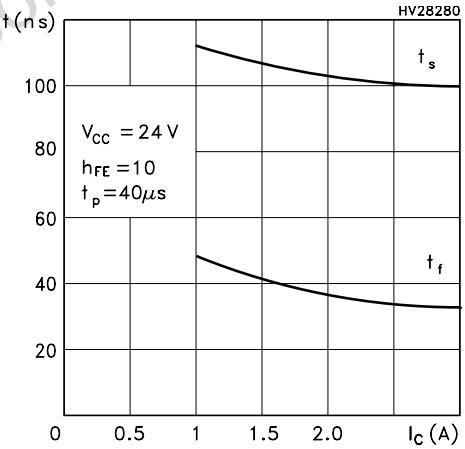
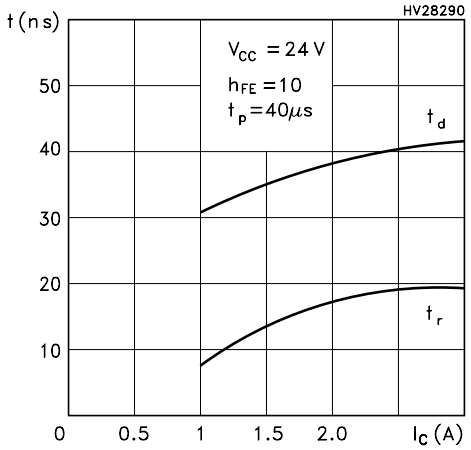
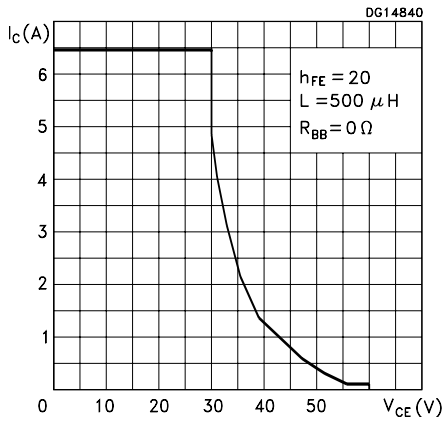


Figure 6. Switching times resistive on load



Obsolete Product(s) - Obsolete Product(s)

Figure 7. Reverse biased area



Obsolete Product(s) - Obsolete Product(s)

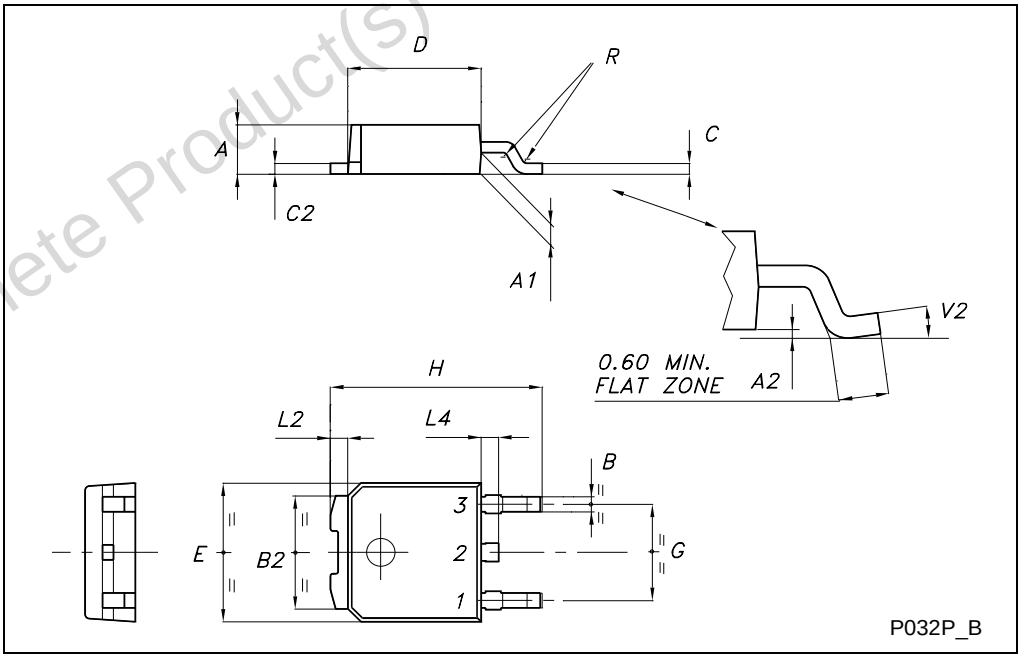
3 Package Mechanical Data

In order to meet environmental requirements, ST offers these devices in ECOPACK® packages. These packages have a Lead-free second level interconnect . The category of second level interconnect is marked on the package and on the inner box label, in compliance with JEDEC Standard JESD97. The maximum ratings related to soldering conditions are also marked on the inner box label. ECOPACK is an ST trademark. ECOPACK specifications are available at: www.st.com

Obsolete Product(s) - Obsolete Product(s)

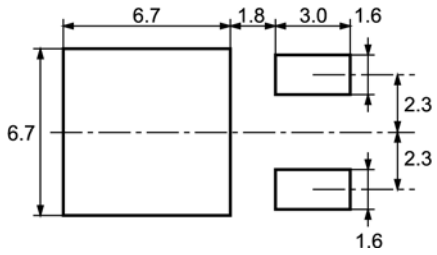
TO-252 (DPAK) MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	2.20		2.40	0.087		0.094
A1	0.90		1.10	0.035		0.043
A2	0.03		0.23	0.001		0.009
B	0.64		0.90	0.025		0.035
B2	5.20		5.40	0.204		0.213
C	0.45		0.60	0.018		0.024
C2	0.48		0.60	0.019		0.024
D	6.00		6.20	0.236		0.244
E	6.40		6.60	0.252		0.260
G	4.40		4.60	0.173		0.181
H	9.35		10.10	0.368		0.398
L2		0.8			0.031	
L4	0.60		1.00	0.024		0.039
V2	0^o		8^o	0^o		0^o



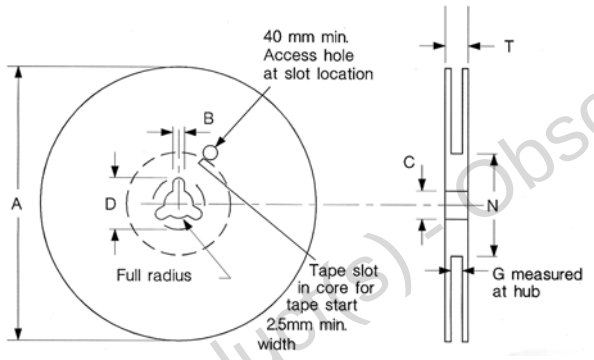
Obsolete Product(s) - Obsolete Product(s)

DPAK FOOTPRINT



All dimensions are in millimeters

TAPE AND REEL SHIPMENT



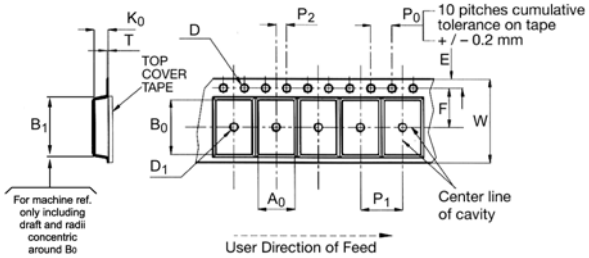
REEL MECHANICAL DATA

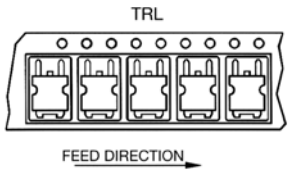
DIM.	mm		inch	
	MIN.	MAX.	MIN.	MAX.
A		330		12.992
B	1.5		0.059	
C	12.8	13.2	0.504	0.520
D	20.2		0.795	
G	16.4	18.4	0.645	0.724
N	50		1.968	
T		22.4		0.881

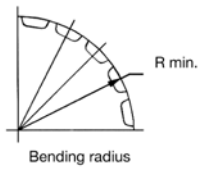
BASE QTY	BULK QTY
2500	2500

TAPE MECHANICAL DATA

DIM.	mm		inch	
	MIN.	MAX.	MIN.	MAX.
A0	6.8	7	0.267	0.275
B0	10.4	10.6	0.409	0.417
B1		12.1		0.476
D	1.5	1.6	0.059	0.063
D1	1.5		0.059	
E	1.65	1.85	0.065	0.073
F	7.4	7.6	0.291	0.299
K0	2.55	2.75	0.100	0.108
P0	3.9	4.1	0.153	0.161
P1	7.9	8.1	0.311	0.319
P2	1.9	2.1	0.075	0.082
R	40		1.574	
W	15.7	16.3	0.618	0.641







Obsolete Product(s) - Obsolete Product(s)

4 Revision History

Date	Revision	Changes
03-Aug-2005	1	Initial release.

Obsolete Product(s) - Obsolete Product(s)

Obsolete Product(s) - Obsolete Product(s)

Information furnished is believed to be accurate and reliable. However, STMicroelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of STMicroelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. STMicroelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of STMicroelectronics.

The ST logo is a registered trademark of STMicroelectronics.
All other names are the property of their respective owners

© 2005 STMicroelectronics - All rights reserved

STMicroelectronics group of companies

Australia - Belgium - Brazil - Canada - China - Czech Republic - Finland - France - Germany - Hong Kong - India - Israel - Italy - Japan - Malaysia - Malta - Morocco - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States of America

www.st.com