



2N6284
2N6287

COMPLEMENTARY SILICON POWER DARLINGTON TRANSISTORS

- STMicroelectronics PREFERRED SALESTYPES
- COMPLEMENTARY PNP - NPN DEVICES
- INTEGRATED ANTIPARALLEL COLLECTOR-EMITTER DIODE

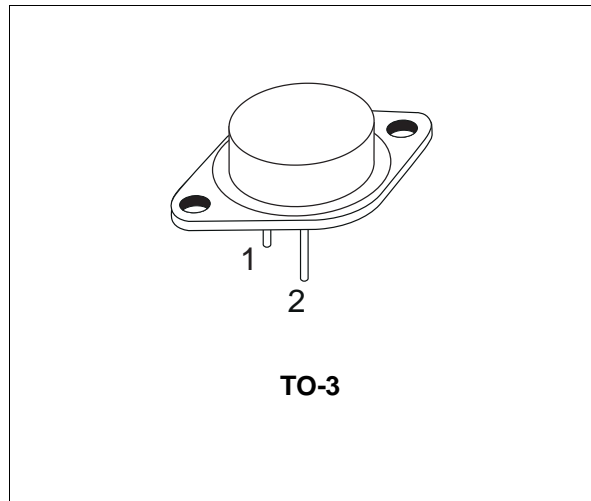
APPLICATIONS

- LINEAR AND SWITCHING INDUSTRIAL EQUIPMENT

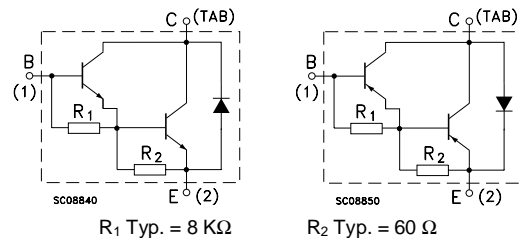
DESCRIPTION

The 2N6284 is a silicon epitaxial-base NPN power transistor in monolithic Darlingon configuration mounted in Jedec TO-3 metal case. It is intended for general purpose amplifier and low frequency switching applications.

The complementary PNP types is 2N6287.



INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value		Unit
		NPN	PNP	
V_{CBO}	Collector-Base Voltage ($I_E = 0$)	2N6284		V
V_{CEO}	Collector-Emitter Voltage ($I_B = 0$)	2N6287		
V_{EBO}	Emitter-Base Voltage ($I_C = 0$)	100		V
I_C	Collector Current	5		A
I_{CM}	Collector Peak Current	20		A
I_B	Base Current	40		A
P_{tot}	Total Dissipation at $T_c \leq 25^\circ C$	0.5		W
T_{stg}	Storage Temperature	-65 to 200		$^\circ C$
T_j	Max. Operating Junction Temperature	200		$^\circ C$

For PNP types voltage and current values are negative.

THERMAL DATA

R _{thj-case}	Thermal Resistance Junction-case	Max	1.09	°C/W
-----------------------	----------------------------------	-----	------	------

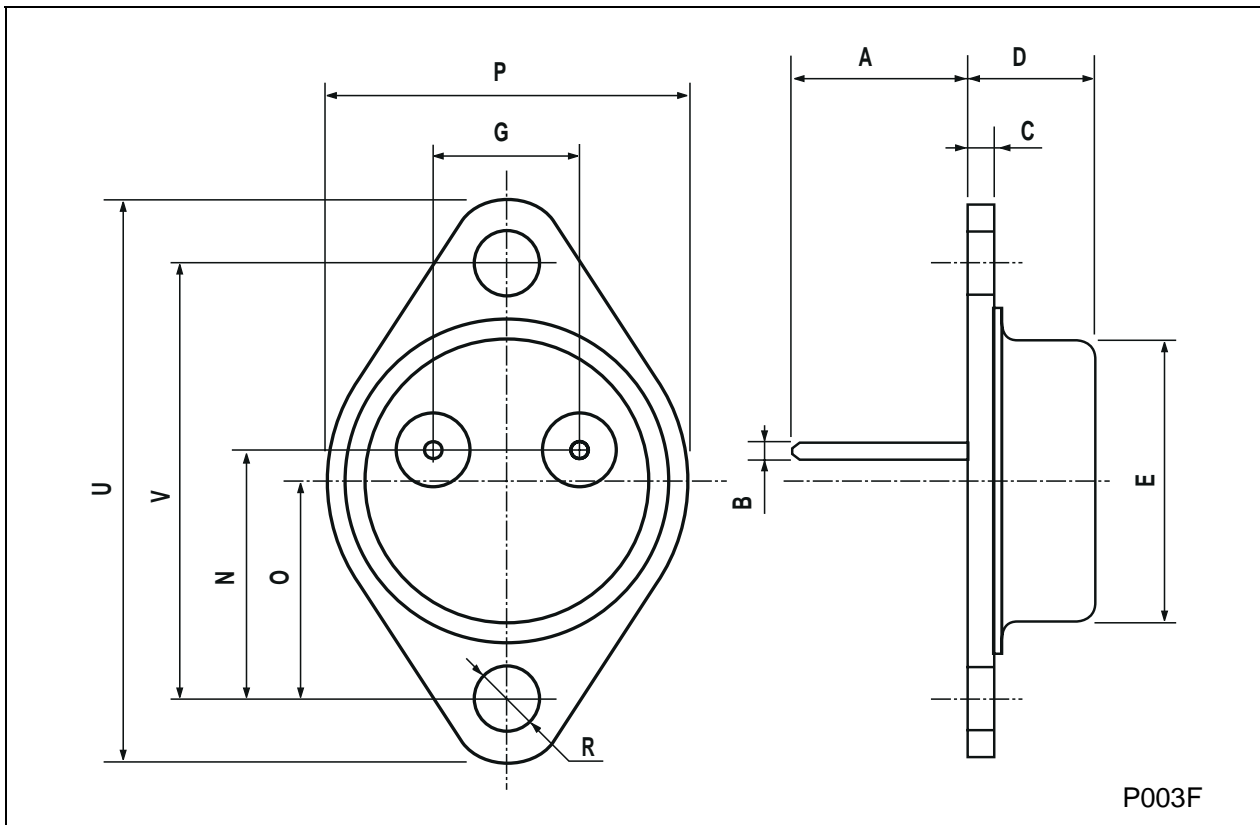
ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CEV}	Collector Cut-off Current (V _{BE} = -1.5V)	V _{CE} = rated V _{CEO} V _{CE} = rated V _{CEO} T _c = 150 °C			0.5 5	mA mA
I _{CEO}	Collector Cut-off Current (I _B = 0)	V _{CE} = 50 V			1	mA
I _{EBO}	Emitter Cut-off Current (I _C = 0)	V _{EB} = 5 V			2	mA
V _{CEO(sus)*}	Collector-Emitter Sustaining Voltage	I _C = 100 mA	100			V
V _{CE(sat)*}	Collector-Emitter Saturation Voltage	I _C = 10 A I _B = 40 mA I _C = 20 A I _B = 200 mA			2 3	V V
V _{BE(sat)*}	Base-Emitter Saturation Voltage	I _C = 20 A I _B = 200 mA			4	V
V _{BE*}	Base-Emitter Voltage	I _C = 10 A V _{CE} = 3 V			2.8	V
h _{FE*}	DC Current Gain	I _C = 10 A V _{CE} = 3 V I _C = 20 A V _{CE} = 3 V	750 100		18000	
h _{fe}	Small Signal Current Gain	I _C = 3 A V _{CE} = 10 V f = 1KHz	300			
C _{CBO}	Collector Base Capacitance	I _E = 0 V _{CB} = 10 V f = 100KHz for NPN types for PNP types			400 600	pF pF

* Pulsed: Pulse duration = 300 μs, duty cycle 1.5 %

TO-3 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	11.00		13.10	0.433		0.516
B	0.97		1.15	0.038		0.045
C	1.50		1.65	0.059		0.065
D	8.32		8.92	0.327		0.351
E	19.00		20.00	0.748		0.787
G	10.70		11.10	0.421		0.437
N	16.50		17.20	0.649		0.677
P	25.00		26.00	0.984		1.023
R	4.00		4.09	0.157		0.161
U	38.50		39.30	1.515		1.547
V	30.00		30.30	1.187		1.193



P003F

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. Specification 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 trademark of STMicroelectronics

© 2000 STMicroelectronics – Printed in Italy – All Rights Reserved

STMicroelectronics GROUP OF COMPANIES

Australia - Brazil - China - Finland - France - Germany - Hong Kong - India - Italy - Japan - Malaysia - Malta - Morocco - Singapore - Spain - Sweden - Switzerland - United Kingdom - U.S.A.

<http://www.st.com>