



2N6059

SILICON NPN POWER DARLINGTON TRANSISTOR

- STMicroelectronics PREFERRED SALESTYPE
- HIGH GAIN
- NPN DARLINGTON
- HIGH CURRENT
- HIGH DISSIPATION
- INTEGRATED ANTIPARALLEL COLLECTOR-EMITTER DIODE

APPLICATIONS

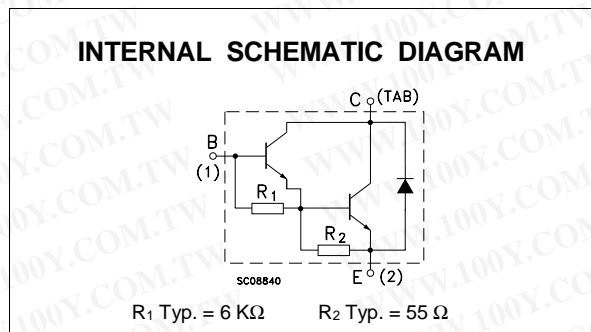
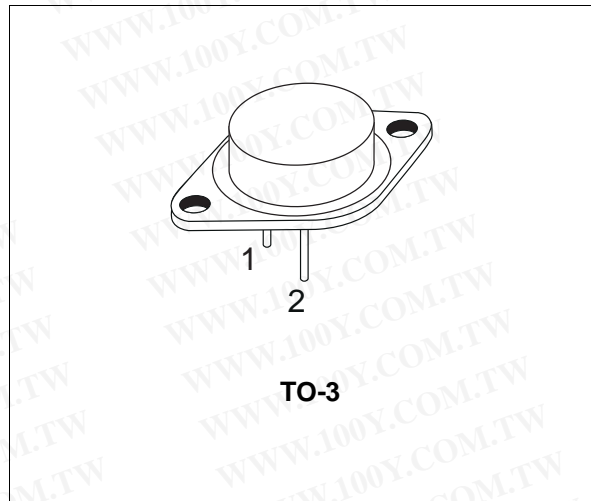
- LINEAR AND SWITCHING INDUSTRIAL EQUIPMENT

DESCRIPTION

The 2N6059 is a silicon Epitaxial-Base NPN transistor in monolithic Darlington configuration mounted in Jedec TO-3 metal case.

It is intended for use in power linear and low frequency switching applications.

勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-34970699
勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage (I _E = 0)	100	V
V _{CEX}	Collector-Emitter Voltage (V _{BE} = -1.5V)	100	V
V _{CEO}	Collector-Emitter Voltage (I _B = 0)	100	V
V _{EBO}	Emitter-Base Voltage (I _C = 0)	5	V
I _C	Collector Current	12	A
I _{CM}	Collector Peak Current (t _p < 5 ms)	20	A
I _B	Base Current	0.2	A
P _{tot}	Total Dissipation at T _c ≤ 25 °C	150	W
T _{stg}	Storage Temperature	-65 to 200	°C
T _j	Max. Operating Junction Temperature	200	°C

THERMAL DATA

R _{thj-case}	Thermal Resistance Junction-case	Max	1.17	°C/W
-----------------------	----------------------------------	-----	------	------

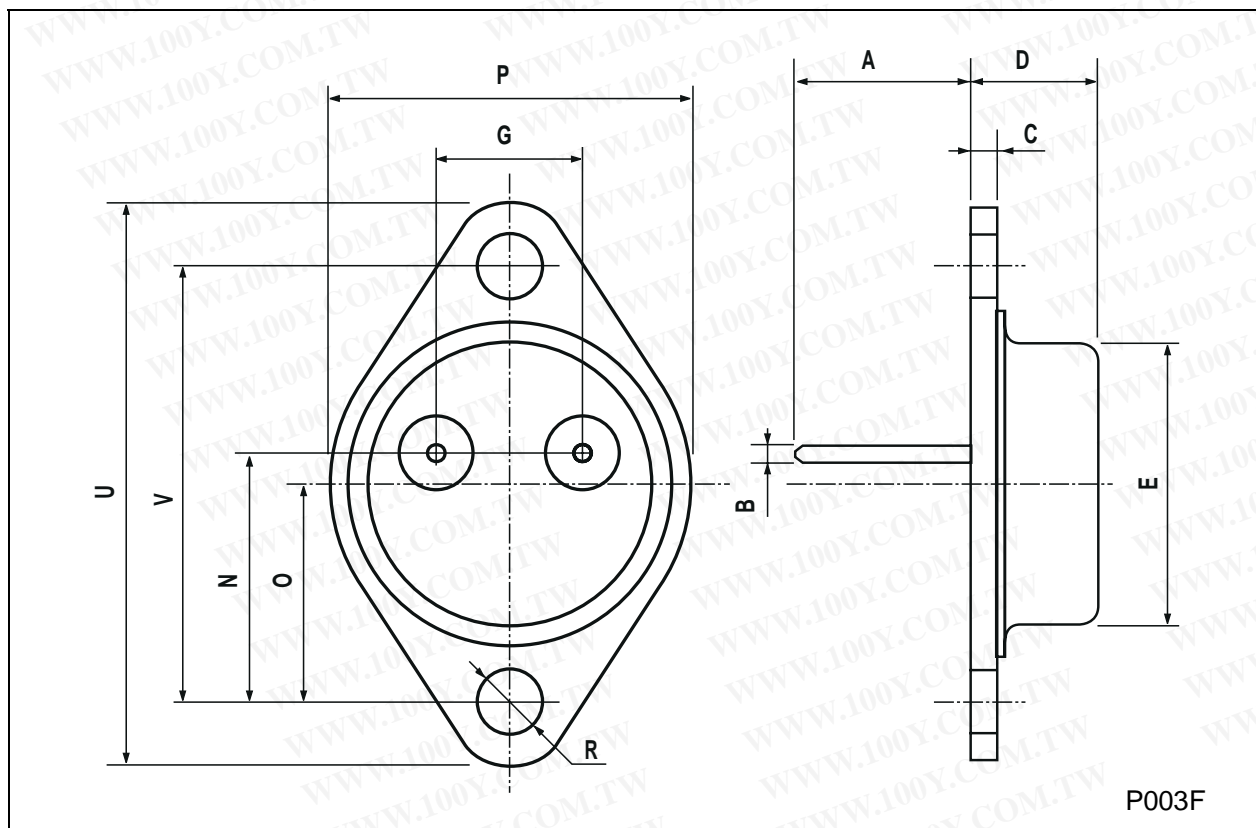
ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CEX}	Collector Cut-off Current (V _{BE} = -1.5V)	V _{CE} = rated V _{CEX} V _{CE} = rated V _{CEX} 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 _B = 0)	I _C = 100 mA	100			V
V _{CE(sat)} *	Collector-Emitter Saturation Voltage	I _C = 6 A I _B = 24 mA I _C = 12 A I _B = 120 mA			2 3	V V
V _{BE(sat)} *	Base-Emitter Saturation Voltage	I _C = 12 A I _B = 120 mA			4	V
V _{BE} *	Base-Emitter Voltage	I _C = 6 A V _{CE} = 3 V			2.8	V
h _{FE} *	DC Current Gain	I _C = 6 A V _{CE} = 3 V I _C = 12 A V _{CE} = 3 V	750 100			
f _T	Transition frequency	I _C = 5 A V _{CE} = 3 V f = 1 MHz	4			MHz

* 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



勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-34970699
勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

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

© 2003 STMicroelectronics – Printed in Italy – All Rights Reserved

STMicroelectronics GROUP OF COMPANIES

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

<http://www.st.com>