



**2N6284**  
**2N6287**

## COMPLEMENTARY SILICON POWER DARLINGTON TRANSISTORS

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

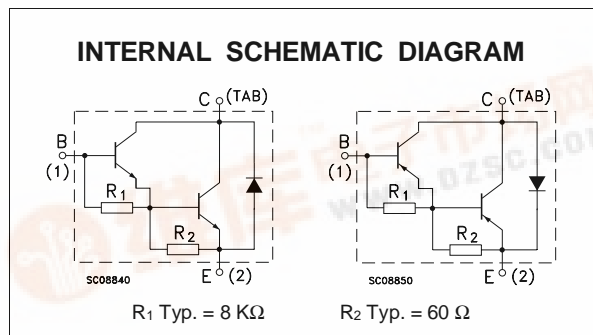
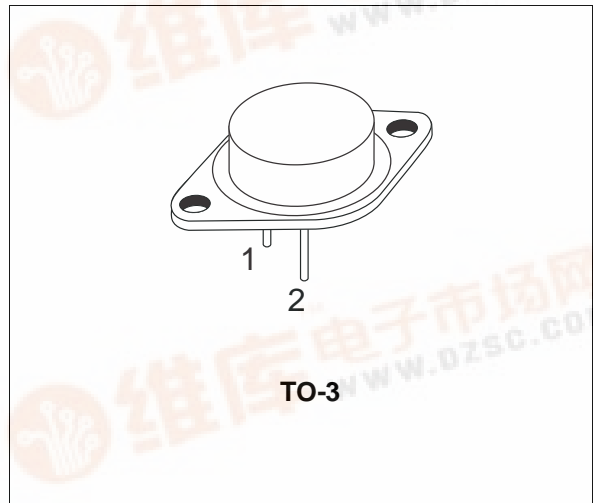
### APPLICATIONS

- LINEAR AND SWITCHING INDUSTRIAL EQUIPMENT

### DESCRIPTION

The 2N6284 is a silicon epitaxial-base NPN power transistor in monolithic Darlington 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.



### ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value		Unit
		NPN	2N6284	
		PNP	2N6287	
$V_{CBO}$	Collector-Base Voltage ( $I_E = 0$ )		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		20	A
$I_{CM}$	Collector Peak Current		40	A
$I_B$	Base Current		0.5	A
$P_{tot}$	Total Dissipation at $T_c \leq 25^\circ C$		160	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.

## 2N6284 / 2N6287

### THERMAL DATA

$R_{thj-case}$	Thermal Resistance Junction-case	Max	1.09	$^{\circ}C/W$
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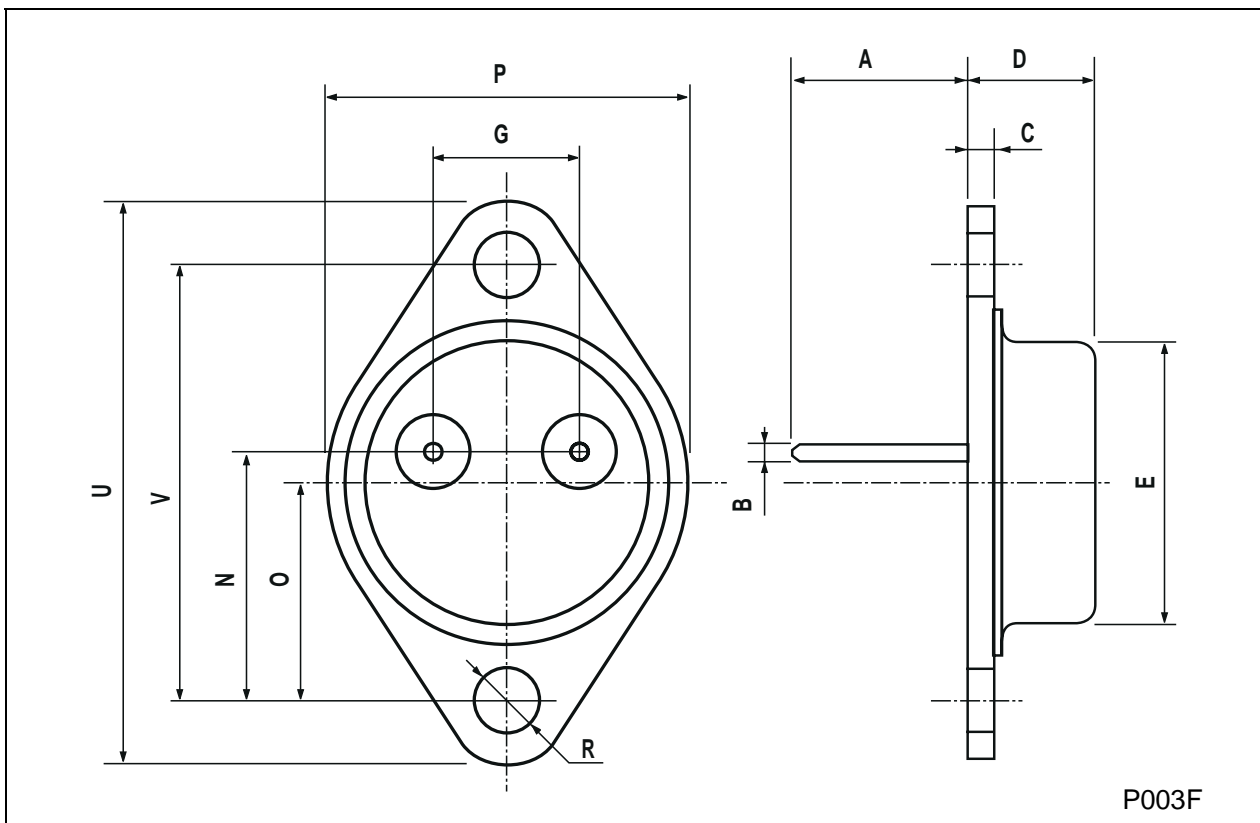
### ELECTRICAL CHARACTERISTICS ( $T_{case} = 25^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$I_{CEV}$	Collector Cut-off Current ( $V_{BE} = -1.5V$ )	$V_{CE} = \text{rated } V_{CEO}$ $V_{CE} = \text{rated } V_{CEO} \quad T_c = 150^{\circ}C$			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	$I_C = 10 A \quad I_B = 40 mA$ $I_C = 20 A \quad I_B = 200 mA$			2 3	V V
$V_{BE(sat)*}$	Base-Emitter Saturation Voltage	$I_C = 20 A \quad I_B = 200 mA$			4	V
$V_{BE*}$	Base-Emitter Voltage	$I_C = 10 A \quad V_{CE} = 3 V$			2.8	V
$h_{FE*}$	DC Current Gain	$I_C = 10 A \quad V_{CE} = 3 V$ $I_C = 20 A \quad V_{CE} = 3 V$	750 100		18000	
$h_{fe}$	Small Signal Current Gain	$I_C = 3 A \quad V_{CE} = 10 V \quad f = 1KHz$	300			
$C_{CBO}$	Collector Base Capacitance	$I_E = 0 \quad V_{CB} = 10 V \quad f = 100KHz$ for <b>NPN types</b> for <b>PNP types</b>			400 600	pF pF

\* Pulsed: Pulse duration = 300  $\mu s$ , 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



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