

**COMPLEMENTARY SILICON
POWER DARLINGTON TRANSISTORS**

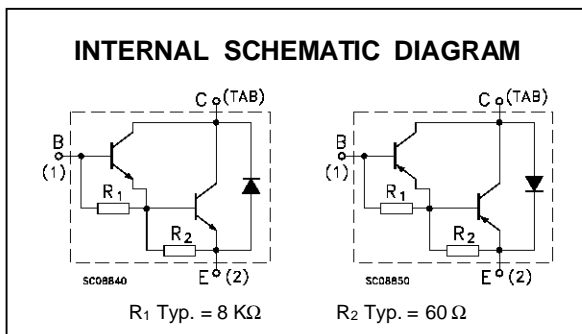
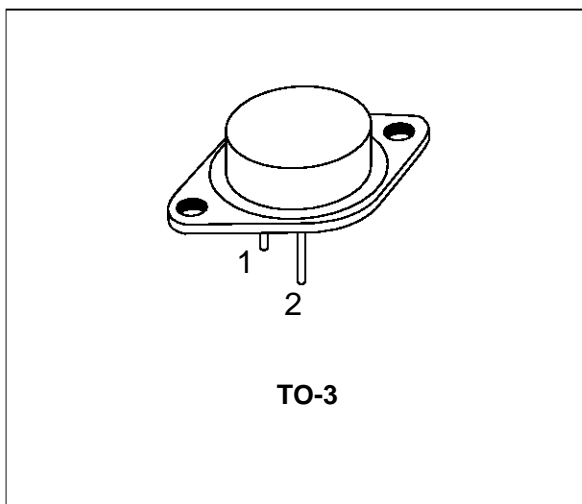
- 2N6284 AND 2N6287 ARE SGS-THOMSON PREFERRED SALESTYPES

DESCRIPTION

The 2N6283 and 2N6284 are silicon epitaxial-base NPN power transistor in monolithic Darlington configuration mounted in Jedec TO-3 metal case.

They are intended for general purpose amplifier and low frequency switching applications.

The complementary PNP types are 2N6286 and 2N6287 respectively.



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value		Unit	
		NPN	2N6283		2N6284
		PNP	2N6286		2N6287
V_{CBO}	Collector-Base Voltage ($I_E = 0$)		80	100	V
V_{CEO}	Collector-Emitter Voltage ($I_B = 0$)		80	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.

2N6283/2N6284/2N6286/2N6287

THERMAL DATA

R _{thj-case}	Thermal Resistance Junction-case	Max	1.09	°C/W
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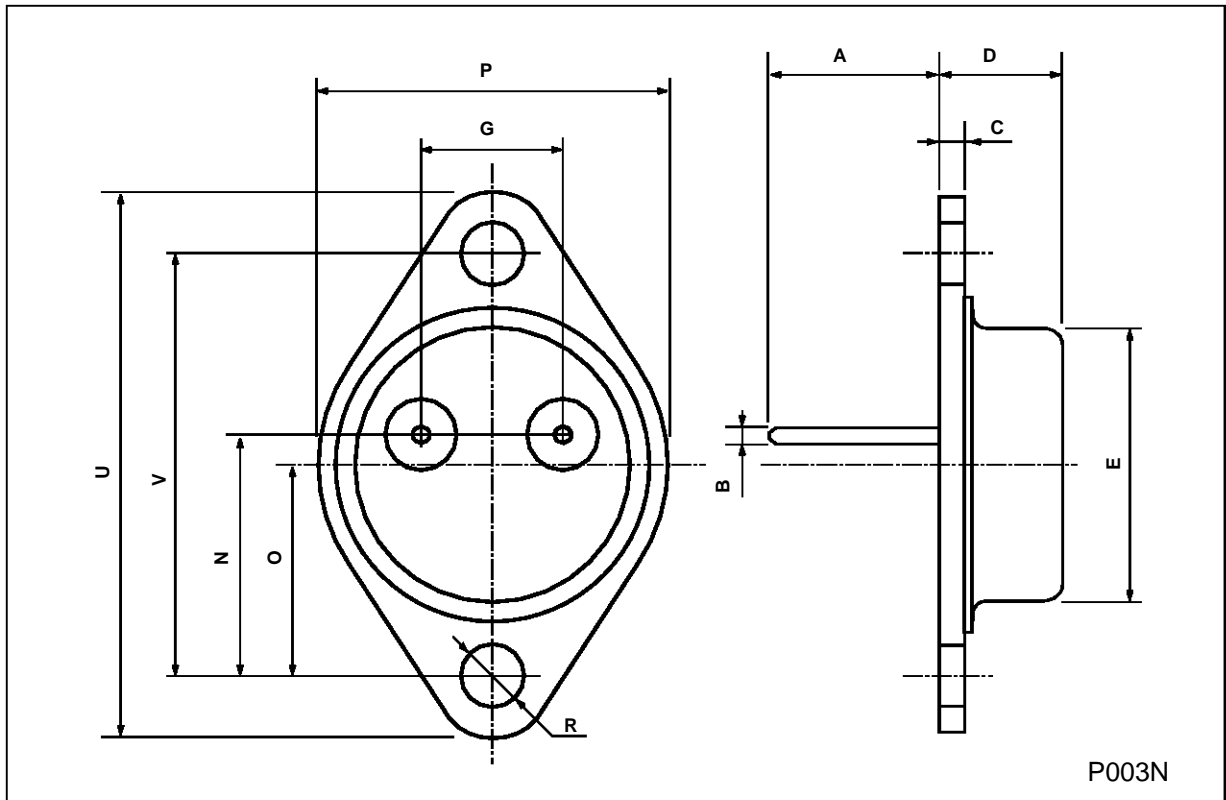
ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

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)	for 2N6283/2N6286 V _{CE} = 40 V for 2N6284/2N6287 V _{CE} = 50 V			1 1	mA 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 for 2N6283/2N6286 for 2N6284/2N6287	80 100			V 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 (H) MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A		11.7			0.460	
B	0.96		1.10	0.037		0.043
C			1.70			0.066
D			8.7			0.342
E			20.0			0.787
G		10.9			0.429	
N		16.9			0.665	
P			26.2			1.031
R	3.88		4.09	0.152		0.161
U			39.50			1.555
V		30.10			1.185	



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