



## 2N6282 – 2N6283 – 2N6284

### NPN SILICON DARLINGTON POWER TRANSISTOR

The 2N6282, 2N6283 and 2N6284 are mounted in TO-3 metal package. They are designed for use in general-purpose amplifier and low-frequency switching applications.

The complementary PNP are 2N6285, 2N6286, 2N6287  
Compliance to RoHS.

#### ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
$V_{CEO}$	Collector-Emitter Voltage ( $I_B=0$ )	2N6282	60	V
		2N6283	80	
		2N6284	100	
$V_{CBO}$	Collector-Base Voltage ( $I_E=0$ )	2N6282	60	V
		2N6283	80	
		2N6284	100	
$V_{EBO}$	Emitter-Base Voltage ( $I_C=0$ )	2N6282	5	V
		2N6283		
		2N6284		
$I_C$	Collector Current	2N6282	20	A
		2N6283		
		2N6284		
$I_{CM}$	Collector Peak Current	2N6282	40	A
		2N6283		
		2N6284		
$I_B$	Base Current	2N6282	0.5	A
		2N6283		
		2N6284		
$P_T$	Power Dissipation	@ $T_C = 25^\circ$	160	W/°C
		2N6282		
		2N6283		
$T_J$	Junction Temperature	2N6282	200	°C
		2N6283		
		2N6284		
$T_S$	Storage Temperature	2N6282	-65 to +200	°C
		2N6283		
		2N6284		

## 2N6282 – 2N6283 – 2N6284

### THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
$R_{thJ-C}$	Thermal Resistance Junction-Case	1.09	°C/W

### ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit					
$V_{CE0(SUS)}$	Collector-Emitter Breakdown Voltage (*)	$I_C = 200 \text{ mA}$ $I_B = 0$	2N6282	60	-	-	V				
			2N6283	80	-	-					
			2N6284	100	-	-					
$I_{CEO}$	Collector Cutoff Current	$V_{CE} = 30 \text{ V}, I_B = 0$	2N6282	-	-	1	mA				
		$V_{CE} = 40 \text{ V}, I_B = 0$	2N6283								
		$V_{CE} = 50 \text{ V}, I_B = 0$	2N6284								
$I_{EBO}$	Emitter Cutoff Current	$V_{BE} = 5 \text{ V}, I_C = 0$	2N6282	-	-	2	mA				
			2N6283								
			2N6284								
$I_{CEX}$	Collector Cutoff Current	$V_{CE} = 60 \text{ V}, V_{BE} = -1.5 \text{ V}$	2N6282	-	-	500	$\mu\text{A}$				
		$V_{CE} = 80 \text{ V}, V_{BE} = -1.5 \text{ V}$	2N6283								
		$V_{CE} = 100 \text{ V}, V_{BE} = -1.5 \text{ V}$	2N6284								
		$V_{CE} = 60 \text{ V}, V_{BE} = -1.5 \text{ V}$ $T_C = 150^\circ\text{C}$	2N6282					-	-	5	mA
		$V_{CE} = 80 \text{ V}, V_{BE} = -1.5 \text{ V}$ $T_C = 150^\circ\text{C}$	2N6283								
		$V_{CE} = 100 \text{ V}, V_{BE} = -1.5 \text{ V}$ $T_C = 150^\circ\text{C}$	2N6284								
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C = 10 \text{ A}, I_B = 40 \text{ mA}$	2N6282	-	-	2	V				
			2N6283								
			2N6284								
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C = 20 \text{ A}, I_B = 200 \text{ mA}$	2N6282	-	-	3	V				
			2N6283								
			2N6284								
$V_{BE(SAT)}$	Base-Emitter saturation Voltage (*)	$I_C = 20 \text{ A}, I_B = 200 \text{ mA}$	2N6282	-	-	4	V				
			2N6283								
			2N6284								
$V_{BE}$	Base-Emitter Voltage (*)	$V_{CE} = 3 \text{ V}, I_C = 10 \text{ A}$	2N6282	-	-	2,8	V				
			2N6283								
			2N6284								

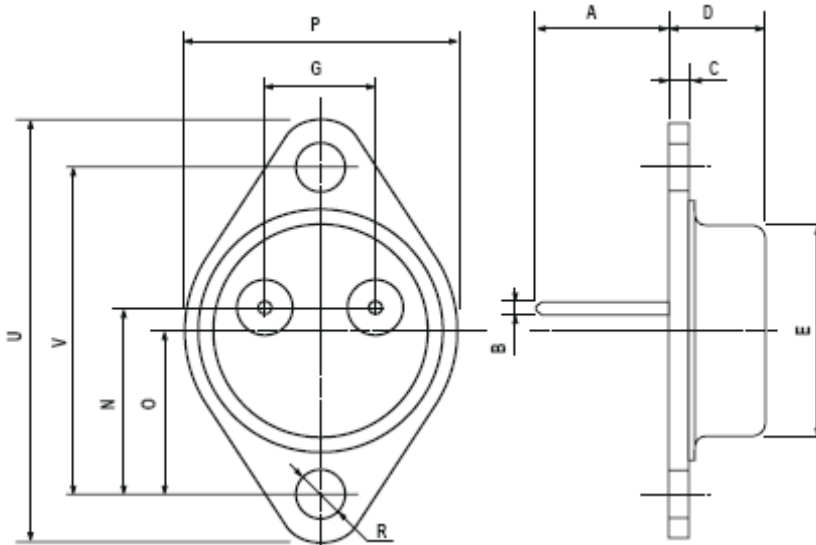
## 2N6282 – 2N6283 – 2N6284

Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit
$h_{FE}$	DC Current Gain (*)	$V_{CE} = 3\text{ V}, I_C = 10\text{ A}$	2N6282	750	-	18000
			2N6283			
			2N6284			
		$V_{CE} = 3\text{ V}, I_C = 20\text{ A}$	2N6282	100	-	-
			2N6283			
			2N6284			
$C_{OB}$	Output Capacitance	$I_E = 0\text{ A}, V_{CB} = 10\text{ V}$ $f = 1\text{ MHz}$	2N6282	-	-	400
			2N6283			
			2N6284			

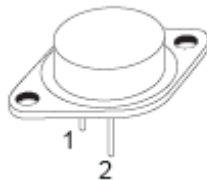
(\*) Pulse Width  $\approx 300\ \mu\text{s}$ , Duty Cycle  $\leq 2.0\%$

### MECHANICAL DATA CASE TO-3

DIMENSIONS (mm)		
	min	max
A	11	13.10
B	0.97	1.15
C	1.5	1.65
D	8.32	8.92
F	19	20
G	10.70	11.1
N	16.50	17.20
P	25	26
R	4	4.09
U	38.50	39.30
V	30	30.30



Pin 1 :	Base
Pin 2 :	Emitter
Case :	Collector



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