



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		

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THERMAL CHARACTERISTICS

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

ELECTRICAL CHARACTERISTICS

$T_C=25^{\circ}\text{C}$ 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	μA				
		$V_{CE}=80\text{ V}, V_{BE}=-1.5\text{ V}$	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								

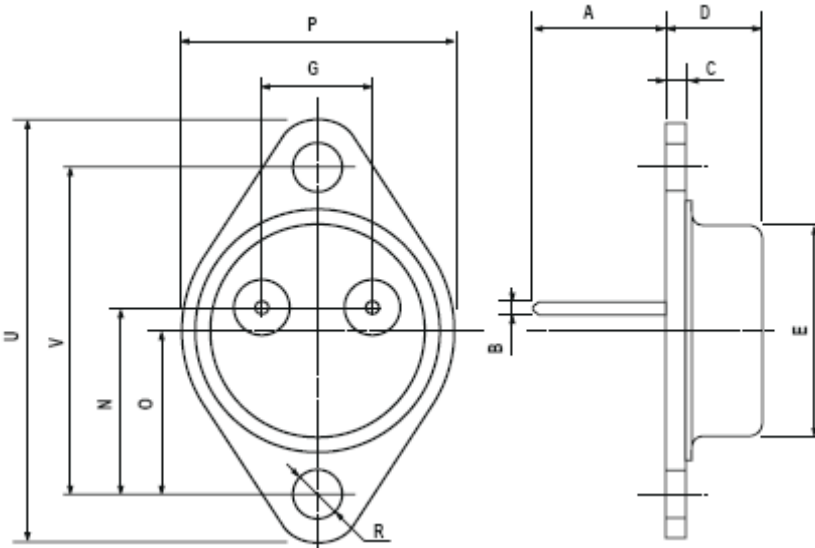
2N6282 – 2N6283 – 2N6284

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			

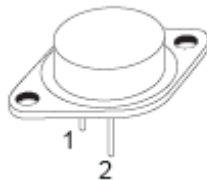
(*) Pulse Width $\approx 300\ \mu\text{s}$, Duty Cycle $\leq 2.0\%$

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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