Data Sheet

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Manufacturers of World Class Discrete Semiconductors

2N6648
2N6649
2N6650

PNP SILICON POWER DARLINGTON TRANSISTOR

JEDEC TO-3 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N6648 series types are PNP Silicon Power Darlington Transistors designed for power switching and amplifier applications.

MAXIMUM RATINGS (T_C=25°C)

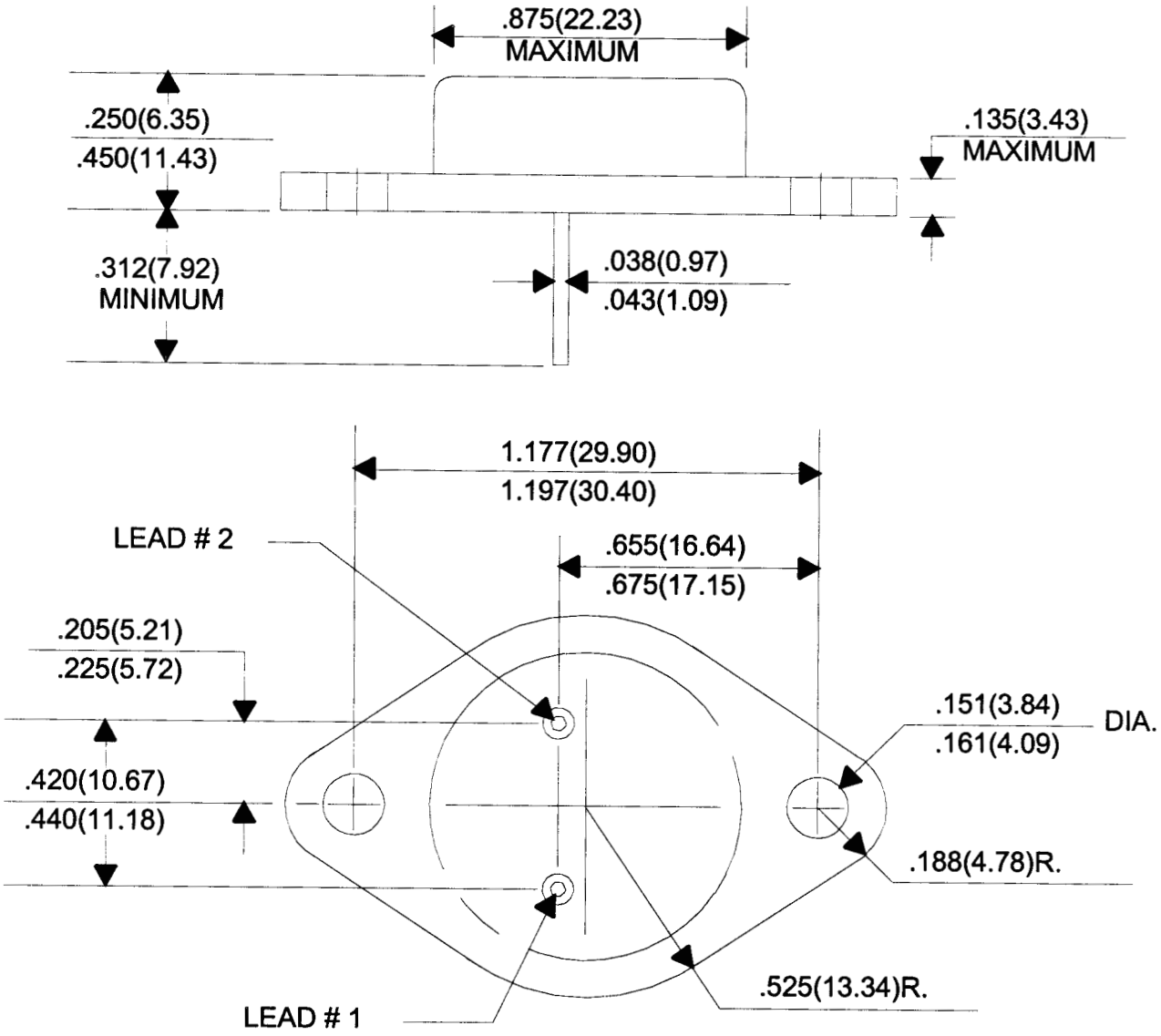
	SYMBOL	2N6648	2N6649	2N6650	UNITS
Collector-Base Voltage	V_{CBO}	40	60	80	V
Collector-Emitter Voltage	V_{CEX}	40	60	80	V
Collector-Emitter Voltage	V_{CEO}	40	60	80	V
Emitter-Base Voltage	V_{EBO}		5.0		V
Continuous Collector Current	I_C		10		A
Peak Collector Current	I_{CM}		15		A
Continuous Base Current	I_B		250		mA
Power Dissipation	P_D		100		W
Operating and Storage Junction Temperature	T_J,T_{stg}		-65 to +200		°C
Thermal Resistance	Θ_{JC}		1.75		°C/W

ELECTRICAL CHARACTERISTICS (T_C=25°C unless otherwise noted)

		2N6648		2N6649		2N6650		
SYMBOL	TEST CONDITIONS	MIN	MAX	MIN	MAX	MIN	MAX	UNITS
I_{CEV}	V_{CEV}=Rated V_{CEO}, $V_{BE(off)}$=1.5V		0.3		0.3		0.3	mA
I_{CEV}	V_{CEV}=Rated V_{CEO}, $V_{BE(off)}$=1.5V, T_C=150°C		3.0		3.0		3.0	mA
I_{CEO}	V_{CE}= Rated V_{CEO}		1.0		1.0		1.0	mA
I_{EBO}	V_{EB}=5.0V		10		10		10	mA
BV_{CEV}	I_C=100mA, $V_{BE(off)}$=1.5V		40		60		80	V
BV_{CER}	I_C=100mA, R_{BE}=100Ω		40		60		80	V
BV_{CEO}	I_C=100mA		40		60		80	V
$V_{CE(SAT)}$	I_C=5.0A, I_B=10mA		2.0		2.0		2.0	V
$V_{CE(SAT)}$	I_C=10A, I_B=100mA		3.0		3.0		3.0	V
$V_{BE(ON)}$	V_{CE}=3.0V, I_C=5.0A		2.8		2.8		2.8	V
$V_{BE(ON)}$	V_{CE}=3.0V, I_C=10A		4.5		4.5		4.5	V
h_{FE}	V_{CE}=3.0V, I_C=5.0A	1K	20K	1K	20K	1K	20K	
h_{FE}	V_{CE}=3.0V, I_C=10A	100		100		100		
V_F	I_F=10A		4.0		4.0		4.0	V
C_{ob}	V_{CB}=10V, I_E=0, f=1.0MHz		200		200		200	pF
$\|h_{he}\|$	V_{CE}=5.0V, I_C=1.0A, f=1.0MHz	20		20		20		
h_{he}	V_{CE}=5.0V, I_C=1.0A, f=1.0kHz	1K		1K		1K		

(SEE REVERSE SIDE)

TO-3 CASE - MECHANICAL OUTLINE



All Dimensions in Inches (mm).

Lead Code:

1) Base
2) Emitter
Case) Collector

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