

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N6576
2N6577
2N6578

NPN SILICON POWER
DARLINGTON TRANSISTOR

JEDEC TO-3 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N6576 series types are NPN Silicon Power Darlington Transistors designed for general purpose switching applications.

MAXIMUM RATINGS ($T_C=25^\circ\text{C}$)

	SYMBOL	2N6576	2N6577	2N6578	UNITS
Collector-Base Voltage	V_{CBO}	60	90	120	V
Collector-Emitter Voltage	V_{CEO}	60	90	120	V
Emitter-Base Voltage	V_{EBO}		7.0		V
Continuous Collector Current	I_C		15		A
Peak Collector Current	I_{CM}		30		A
Continuous Base Current	I_B		250		mA
Peak Base Current	I_{BM}		500		mA
Continuous Emitter Current	I_E		15.25		A
Peak Emitter Current	I_{EM}		30.50		A
Power Dissipation	P_D		120		W
Operating and Storage					
Junction Temperature	T_J, T_{stg}		-65 to +200		$^\circ\text{C}$
Thermal Resistance	θ_{JC}		1.46		$^\circ\text{C/W}$

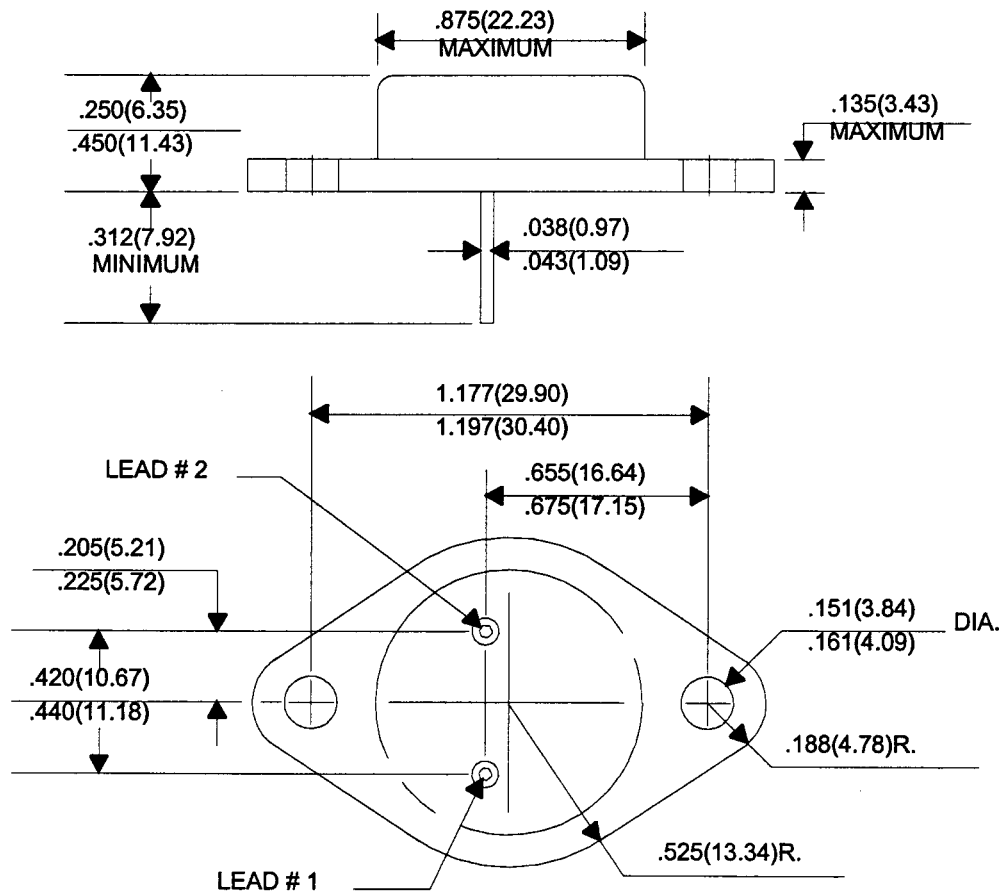
ELECTRICAL CHARACTERISTICS ($T_C=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=\text{Rated } V_{CBO}$		500	μA
I_{CEV}	$V_{CEV}=\text{Rated } V_{CEO}, V_{BE(\text{off})}=1.5\text{V}$		5.0	mA
I_{CER}	$V_{CER}=\text{Rated } V_{CEO}, R_{BE}=10\text{k}\Omega, T_C=150^\circ\text{C}$		5.0	mA
I_{CEO}	$V_{CE}=\text{Rated } V_{CEO}$		1.0	mA
BV_{CEO}	$I_C=200\text{mA}$ (2N6576)	60		V
BV_{CEO}	$I_C=200\text{mA}$ (2N6577)	90		V
BV_{CEO}	$I_C=200\text{mA}$ (2N6578)	120		V
$V_{CE(\text{SAT})}$	$I_C=10\text{A}, I_B=100\text{mA}$		2.8	V
$V_{CE(\text{SAT})}$	$I_C=15\text{A}, I_B=150\text{mA}$		4.0	V
$V_{BE(\text{SAT})}$	$I_C=10\text{A}, I_B=100\text{mA}$		3.5	V
$V_{BE(\text{SAT})}$	$I_C=15\text{A}, I_B=150\text{mA}$		4.5	V
h_{FE}	$V_{CE}=3.0\text{V}, I_C=400\text{mA}$	200		
h_{FE}	$V_{CE}=3.0\text{V}, I_C=4.0\text{A}$	2000	20000	
h_{FE}	$V_{CE}=3.0\text{V}, I_C=10\text{A}$	500	5000	
h_{FE}	$V_{CE}=4.0\text{V}, I_C=15\text{A}$	100		

ELECTRICAL CHARACTERISTICS (CONTINUED)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
V_F	$I_{EC}=15A$		4.5	V
$ h_{hel} $	$V_{CE}=3.0V, I_C=3.0A, f=1.0MHz$	10	200	
t_d	$V_{CC}=30V, I_C=10A, I_{B1}=100mA$		0.15	μs
t_r	$V_{CC}=30V, I_C=10A, I_{B1}=100mA$		1.0	μs
t_s	$V_{CC}=30V, I_C=10A, I_{B1}=I_{B2}=100mA$		2.0	μs
t_f	$V_{CC}=30V, I_C=10A, I_{B1}=I_{B2}=100mA$		7.0	μs

TO-3 CASE - MECHANICAL OUTLINE



All Dimensions in Inches (mm).

Lead Code:

- 1) Base
- 2) Emitter
- Case) Collector

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