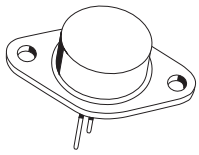
2N6383
2N6384
2N6385

NPN SILICON POWER
DARLINGTON TRANSISTOR



TO-3 CASE

Central™
Semiconductor Corp.

DESCRIPTION:
The CENTRAL SEMICONDUCTOR 2N3683 SERIES types are NPN Silicon Power Darlington Transistors designed for power amplifier applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_C=25°C)	**SYMBOL**	**2N6383**	**2N6384**	**2N6385**	**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
Collector Current	I_C		10		A
Peak Collector Current	I_{CM}		15		A
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)

SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**UNITS**
I_{CEV}	V_{CEV}=Rated V_{CEO}, $V_{BE(off)}$=1.5V		300	μA
I_{CEV}	V_{CEV}=Rated V_{CEO}, $V_{BE(off)}$=1.5V, T_C=150°C		3.0	mA
I_{CEO}	V_{CE}=Rated V_{CEO}		1.0	mA
I_{EBO}	V_{EB}=5.0V		10	mA
BV_{CEO}	I_C=200mA (2N6383)	40		V
BV_{CEO}	I_C=200mA (2N6384)	60		V
BV_{CEO}	I_C=200mA (2N6385)	80		V
BV_{CER}	I_C=200mA, R_{BE}=100Ω (2N6383)	40		V
BV_{CER}	I_C=200mA, R_{BE}=100Ω (2N6384)	60		V
BV_{CER}	I_C=200mA, R_{BE}=100Ω (2N6385)	80		V
BV_{CEV}	I_C=200mA, $V_{BE(off)}$=1.5V (2N6383)	40		V
BV_{CEV}	I_C=200mA, $V_{BE(off)}$=1.5V (2N6384)	60		V
BV_{CEV}	I_C=200mA, $V_{BE(off)}$=1.5V (2N6385)	80		V

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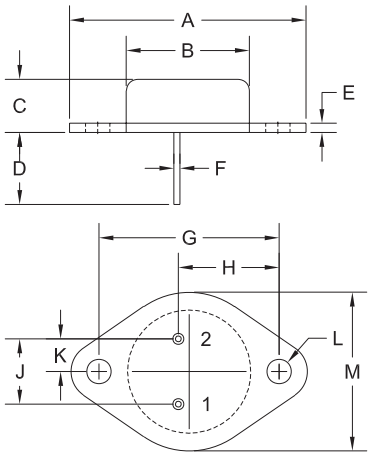
NPN SILICON POWER
DARLINGTON TRANSISTOR

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$V_{CE(SAT)}$	I_C=5.0A, I_B=10mA		2.0	V
$V_{CE(SAT)}$	I_C=10A, I_B=100mA		3.0	V
$V_{BE(ON)}$	V_{CE}=3.0V, I_C=5.0A		2.8	V
$V_{BE(ON)}$	V_{CE}=3.0V, I_C=10A		4.5	V
h_{FE}	V_{CE}=3.0V, I_C=5.0A	1K	20K	
h_{FE}	V_{CE}=3.0V, I_C=10A	100		
V_F	I_F=10A		4.0	V
C_{ob}	V_{CB}=10V, I_E=0, f=1.0MHz		200	pF
$\|h_{he}\|$	V_{CE}=5.0V, I_C=1.0A, f=1.0MHz	20		
h_{he}	V_{CE}=5.0V, I_C=1.0A, f=1.0kHz	1K		

TO-3 CASE - MECHANICAL OUTLINE



R2

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	1.516	1.573	38.50	39.96
B (DIA)	0.748	0.875	19.00	22.23
C	0.250	0.450	6.35	11.43
D	0.433	0.516	11.00	13.10
E	0.054	0.065	1.38	1.65
F	0.035	0.045	0.90	1.15
G	1.177	1.197	29.90	30.40
H	0.650	0.681	16.50	17.30
J	0.420	0.440	10.67	11.18
K	0.205	0.225	5.21	5.72
L (DIA)	0.151	0.172	3.84	4.36
M	0.984	1.050	25.00	26.67

TO-3 (REV: R2)

LEAD CODE:
1) Base
2) Emitter
C) Collector

MARKING: FULL PART NUMBER

R1 (28-August 2008)