

# Central<sup>TM</sup> Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

PMD18K SERIES NPN  
PMD19K SERIES PNP

SILICON POWER  
DARLINGTON TRANSISTORS

JEDEC TO-3 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR PMD18K/PMD19K series types are silicon NPN/PNP darlington power transistors manufactured by the epitaxial base process, mounted in a hermetically sealed metal package, and designed for power switching applications. These devices are designed to be electrical/mechanical equivalents to Lambda part numbers.

## MAXIMUM RATINGS (T<sub>C</sub>=25°C)

	SYMBOL	PMD18K60 PMD19K60	PMD18K80 PMD19K80	PMD18K100 PMD19K100	UNIT
Collector-Base Voltage	V <sub>CEB0</sub>	60	80	100	V
Collector-Emitter Voltage	V <sub>CEO</sub>	60	80	100	V
Emitter-Base Voltage	V <sub>EB0</sub>	5.0	5.0	5.0	V
Collector Current	I <sub>C</sub>	30	30	30	A
Collector Current (Peak)	I <sub>CM</sub>	60	60	60	A
Base Current	I <sub>B</sub>	.75	.75	.75	A
Power Dissipation	P <sub>D</sub>	225	225	225	W
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>STG</sub>	-65 TO +200			°C
Thermal Resistance	θ <sub>JC</sub>	0.78			°C/W

## ELECTRICAL CHARACTERISTICS (T<sub>C</sub>=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
I <sub>CER</sub>	V <sub>CE</sub> =RATED V <sub>CEO</sub> , R <sub>BE</sub> =1.0kΩ		1.0	mA
I <sub>CER</sub>	V <sub>CE</sub> =RATED V <sub>CEO</sub> , R <sub>BE</sub> =1.0kΩ, T <sub>C</sub> =150°C		5.0	mA
I <sub>EB0</sub>	V <sub>EB</sub> =5.0V		2.0	mA
BV <sub>CEO</sub>	I <sub>C</sub> =100mA (PMD18K60, PMD19K60)	60		V
BV <sub>CEO</sub>	I <sub>C</sub> =100mA (PMD18K80, PMD19K80)	80		V
BV <sub>CEO</sub>	I <sub>C</sub> =100mA (PMD18K100, PMD19K100)	100		V
V <sub>CE</sub> (SAT)	I <sub>C</sub> =15A, I <sub>B</sub> =60mA		2.0	V
V <sub>BE</sub> (SAT)	I <sub>C</sub> =15A, I <sub>B</sub> =60mA		2.8	V
V <sub>BE</sub> (ON)	V <sub>CE</sub> =3.0V, I <sub>C</sub> =15A		2.8	V
h <sub>FE</sub> (PMD18K series)	V <sub>CE</sub> =3.0V, I <sub>C</sub> =15A	1000	20,000	
h <sub>FE</sub> (PMD19K series)	V <sub>CE</sub> =3.0V, I <sub>C</sub> =15A	800	20,000	
h <sub>fe</sub>	V <sub>CE</sub> =3.0V, I <sub>C</sub> =9.0A, f=1.0kHz	300	-	
f <sub>T</sub>	V <sub>CE</sub> =3.0V, I <sub>C</sub> =9.0A, f=1.0MHz	4.0		MHz
C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0. f=1.0MHz		600	pF