

PMD18K SERIES NPN
PMD19K SERIES PNP

**COMPLEMENTARY SILICON
DARLINGTON POWER
TRANSISTORS**



TO-3 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR PMD18K, PMD19K series types are complementary silicon Darlington power transistors, manufactured by the epitaxial base process, designed for power switching applications. These devices are designed to be electrical/mechanical equivalents to Lambda part numbers.

MARKING: FULL PART NUMBER

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

Collector-Base Voltage
Collector-Emitter Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Peak Collector Current
Continuous Base Current
Power Dissipation ($T_C=50^\circ\text{C}$)
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL	PMD18K80	PMD18K100	UNITS
	PMD19K80	PMD19K100	
V_{CBO}	80	100	V
V_{CER}	80	100	V
V_{CEO}	80	100	V
V_{EBO}		5.0	V
I_C		30	A
I_{CM}		60	A
I_B		750	mA
P_D		240	W
T_J, T_{stg}	-65 to +200		$^\circ\text{C}$
θ_{JC}	0.625		$^\circ\text{C}/\text{W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CER}	$V_{CE}=54\text{V}, R_{BE}=2.2\text{k}\Omega$ (PMD18K, 19K80)		10	mA
I_{CER}	$V_{CE}=67\text{V}, R_{BE}=2.2\text{k}\Omega$ (PMD18K, 19K100)		10	mA
I_{EBO}	$V_{EB}=5.0\text{V}$		3.0	mA
BV_{CER}	$I_C=100\text{mA}, R_{BE}=2.2\text{k}\Omega$ (PMD18K, 19K80)	80		V
BV_{CER}	$I_C=100\text{mA}, R_{BE}=2.2\text{k}\Omega$ (PMD18K, 19K100)	100		V
BV_{CEO}	$I_C=100\text{mA}$ (PMD18K, 19K80)	80		V
BV_{CEO}	$I_C=100\text{mA}$ (PMD18K, 19K100)	100		V
$V_{CE(SAT)}$	$I_C=15\text{A}, I_B=60\text{mA}$		2.0	V
$V_{BE(SAT)}$	$I_C=15\text{A}, I_B=60\text{mA}$		2.8	V
$V_{BE(ON)}$	$V_{CE}=3.0\text{V}, I_C=15\text{A}$		2.8	V
h_{FE}	$V_{CE}=3.0\text{V}, I_C=15\text{A}$ (PMD18K series)	1.0K	20K	
h_{FE}	$V_{CE}=3.0\text{V}, I_C=15\text{A}$ (PMD19K series)	800	20K	
h_{fe}	$V_{CE}=3.0\text{V}, I_C=9.0\text{A}, f=1.0\text{kHz}$	300		
f_T	$V_{CE}=3.0\text{V}, I_C=9.0\text{A}, f=1.0\text{MHz}$	4.0		MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		600	pF

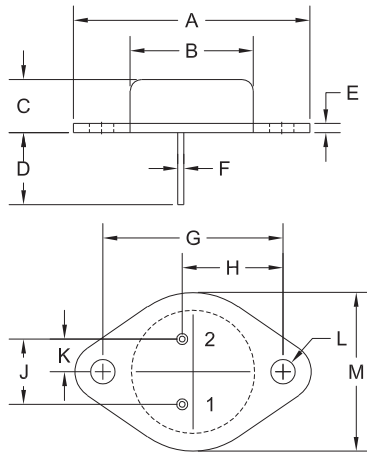
R1 (2-October 2012)

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TO-3 CASE - MECHANICAL OUTLINE



R2

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	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
- Case) Collector

MARKING:

FULL PART NUMBER

R1 (2-October 2012)