

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

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Manufacturers of World Class Discrete Semiconductors

PMD16K SERIES NPN  
PMD17K SERIES PNP

SILICON POWER  
DARLINGTON TRANSISTORS

JEDEC TO-3 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR PMD16K/PMD17K series types are silicon NPN/PNP darlington power transistors manufactured by the epi-taxial-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 ( $T_C=25^\circ\text{C}$ )

	SYMBOL	PMD16K60 PMD17K60	PMD16K80 PMD17K80	PMD16K100 PMD17K100	UNIT
Collector-Base Voltage	$V_{CB0}$	60	80	100	V
Collector-Emitter Voltage	$V_{CE0}$	60	80	100	V
Emitter-Base Voltage	$V_{EB0}$	5.0	5.0	5.0	V
Collector Current	$I_C$	20	20	20	A
Collector Current (Peak)	$I_{CM}$	40	40	40	A
Base Current	$I_B$	0.5	0.5	0.5	A
Power Dissipation	$P_D$	200	200	200	W
Operating and Storage Junction Temperature	$T_J, T_{STG}$	-65 TO +200			$^\circ\text{C}$
Thermal Resistance	$\theta_{JC}$	0.875			$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
$I_{CER}$	$V_{CE}=\text{Rated } V_{CE0}, R_{BE}=1.0\text{K}\Omega$		1.0	mA
$I_{CER}$	$V_{CE}=\text{Rated } V_{CE0}, R_{BE}=1.0\text{K}\Omega, T_C=150^\circ\text{C}$		5.0	mA
$I_{EBO}$	$V_{EB}=5.0\text{V}$		2.0	mA
$BV_{CE0}$	$I_C=100\text{mA}$ (PMD16K60, PMD17K60)	60		V
$BV_{CE0}$	$I_C=100\text{mA}$ (PMD16K80, PMD17K80)	80		V
$BV_{CE0}$	$I_C=100\text{mA}$ (PMD16K100, PMD17K100)	100		V
$V_{CE}(\text{SAT})$	$I_C=10\text{A}, I_B=40\text{mA}$		2.0	V
$V_{BE}(\text{SAT})$	$I_C=10\text{A}, I_B=40\text{mA}$		2.8	V
$V_{BE}(\text{ON})$	$V_{CE}=3.0\text{V}, I_C=10\text{A}$		2.8	V
$h_{FE}$ (PMD16K series)	$V_{CE}=3.0\text{V}, I_C=10\text{A}$	1000	20,000	
$h_{FE}$ (PMD17K series)	$V_{CE}=3.0\text{V}, I_C=10\text{A}$	800	20,000	
$h_{fe}$	$V_{CE}=3.0\text{V}, I_C=7.0\text{A}, f=1.0\text{kHz}$	300	-	
$f_T$	$V_{CE}=3.0\text{V}, I_C=7.0\text{A}, f=1.0\text{MHz}$	4.0		MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		400	pF