

CentralTM 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 eiptaxial-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	θ_{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