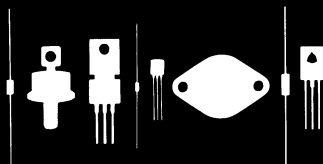


# Central<sup>TM</sup> Semiconductor Corp.

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PMD10K SERIES (NPN)  
PMD11K SERIES (PNP)

SILICON POWER  
DARLINGTON TRANSISTORS

JEDEC TO-3 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR PMD10K/PMD11K 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 ( $T_C=25^{\circ}\text{C}$ )

	SYMBOL	PMD10K60 PMD11K60	PMD10K80 PMD11K80	PMD10K100 PMD11K100	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	$I_C$	12	12	12	A
Collector Current (Peak)	$I_{CM}$	20	20	20	A
Base Current	$I_B$	0.2	0.2	0.2	A
Power Dissipation	$P_D$	150	150	150	W
Operating and Storage Junction Temperature	$T_J, T_{STG}$	-65 TO +200			$^{\circ}\text{C}$
Thermal Resistance	$\theta_{JC}$	1.17			$^{\circ}\text{C/W}$

## 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
$I_{EB0}$	$V_{EB}=5.0\text{V}$		2.0	mA
$BV_{CE0}$	$I_C=100\text{mA}$ (PMD10K60, PMD11K60)	60		V
$BV_{CE0}$	$I_C=100\text{mA}$ (PMD10K80, PMD11K80)	80		V
$BV_{CE0}$	$I_C=100\text{mA}$ (PMD10K100, PMD11K100)	100		V
$V_{CE}(\text{SAT})$	$I_C=6.0\text{A}, I_B=24\text{mA}$		2.0	V
$V_{BE}(\text{SAT})$	$I_C=6.0\text{A}, I_B=24\text{mA}$		2.8	V
$V_{BE}(\text{ON})$	$V_{CE}=3.0\text{V}, I_C=6.0\text{A}$		2.8	V
$h_{FE}$ (PMD10K series)	$V_{CE}=3.0\text{V}, I_C=6.0\text{A}$	1000	20,000	
$h_{FE}$ (PMD11K series)	$V_{CE}=3.0\text{V}, I_C=6.0\text{A}$	800	20,000	
$h_{fe}$	$V_{CE}=3.0\text{V}, I_C=5.0\text{A}, f=1.0\text{kHz}$	300	-	
$f_T$	$V_{CE}=3.0\text{V}, I_C=5.0\text{A}, f=1.0\text{MHz}$	4.0		MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		300	pF

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

#### Corporate Headquarters & Customer Support Team

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