Data Sheet

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Manufacturers of World Class Discrete Semiconductors

PMD1600K SERIES NPN
PMD1700K SERIES PNP

COMPLEMENTARY SILICON POWER
DARLINGTON TRANSISTOR

JEDEC TO-3 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR PMD1600K, 1700K Series types are Complementary Silicon Darlington Power Transistors manufactured by the epitaxial-base process, mounted in a hermetically sealed metal package, designed for power switching applications. These devices are designed to be electrical/mechanical equivalents Lambda part numbers.

MAXIMUM RATINGS (T_C=25°C)

	SYMBOL	PMD1601K PMD1701K	PMD1602K PMD1702K	PMD1603K PMD1703K	UNIT
Collector-Base Voltage	V_{CBO}	60	80	100	V
Collector-Emitter Voltage	V_{CEO}	60	80	100	V
Emitter-Base Voltage	V_{EBO}	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	180	180	180	W
Operating and Storage Junction Temperature	T_J, T_{stg}		-65 TO +200		°C
Thermal Resistance	θJC		0.97		°C/W

ELECTRICAL CHARACTERISTICS (T_C=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
I_{CER}	V_{CE}=.67 x Rated V_{CEO}, R_{BE}=2.2KΩ		7.0	mA
I_{EBO}	V_{EB}=5.0V		3.0	mA
BV_{CER}	I_C=100mA, R_{BE}=2.2KΩ (PMD1601K,1701K)	60		V
BV_{CER}	I_C=100mA, R_{BE}=2.2KΩ (PMD1602K,1702K)	80		V
BV_{CER}	I_C=100mA, R_{BE}=2.2KΩ (PMD1603K,1703K)	100		V
BV_{CEO}	I_C=100mA (PMD1601K,1701K)	60		V
BV_{CEO}	I_C=100mA (PMD1602K,1702K)	80		V
BV_{CEO}	I_C=100mA (PMD1603K,1703K)	100		V
$V_{CE(SAT)}$	I_C=10A, I_B=40mA		2.0	V
$V_{BE(SAT)}$	I_C=10A, I_B=40mA		2.8	V
$V_{BE(ON)}$	V_{CE}=3.0V, I_C=10A		2.8	V
h_{FE}	V_{CE}=3.0V, I_C=10A	750	20,000	
h_{fe}	V_{CE}=3.0V, I_C=7.0A, f=1.0kHz	300	-	
f_T	V_{CE}=3.0V, I_C=7.0A, f=1.0MHz	4.0		MHz
C_{ob}	V_{CB}=10V, I_E=0, f=1.0MHz		400	pF