

CentralTM Semiconductor Corp.

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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	PMD1602K	PMD1603K	UNIT	
	PMD1701K	PMD1702K	PMD1703K		
Collector-Base Voltage	V _{CB0}	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	θ _{JC}	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