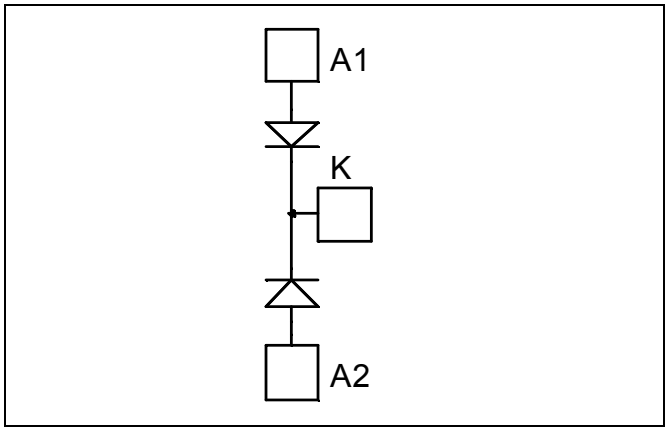
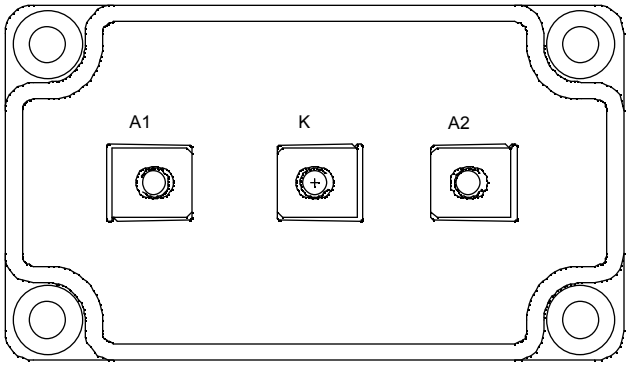
APTDF400KK170

Dual Common Cathode diodes Power Module

V_{RRM} = 1700V
I_C = 400A @ Tc = 55°C





Application

- Uninterruptible Power Supply (UPS)
- Induction heating
- Welding equipment
- High speed rectifiers

Features

- Ultra fast recovery times
- Soft recovery characteristics
- High blocking voltage
- High current
- Low leakage current
- Very low stray inductance
  - Symmetrical design
  - M5 power connectors
- High level of integration

Benefits

- Outstanding performance at high frequency operation
- Low losses
- Low noise switching
- Direct mounting to heatsink (isolated package)
- Low junction to case thermal resistance

Absolute maximum ratings

Symbol	*Parameter*			*Max ratings*	*Unit*
V_R	Maximum DC reverse Voltage			1700	V
V_{RRM}	Maximum Peak Repetitive Reverse Voltage				
$I_{F(AV)}$	Maximum Average Forward Current	Duty cycle = 50%	T_c = 25°C	480	A
			T_c = 55°C	400	
$I_{F(RMS)}$	RMS Forward Current			500	
I_{FSM}	Non-Repetitive Forward Surge Current		T_j = 25°C	1500	

CAUTION: These Devices are sensitive to Electrostatic Discharge. Proper Handing Procedures Should Be Followed.

All ratings @ T_j = 25°C unless otherwise specified

Electrical Characteristics

Symbol	*Characteristic*	*Test Conditions*		*Min*	*Typ*	*Max*	*Unit*
V_F	Diode Forward Voltage	I_F = 400A	T_j = 25°C		2.2	2.5	V
			T_j = 125°C		2.1		
I_{RM}	Maximum Reverse Leakage Current	V_R = 1700V	T_j = 25°C			750	µA
			T_j = 125°C			1000	

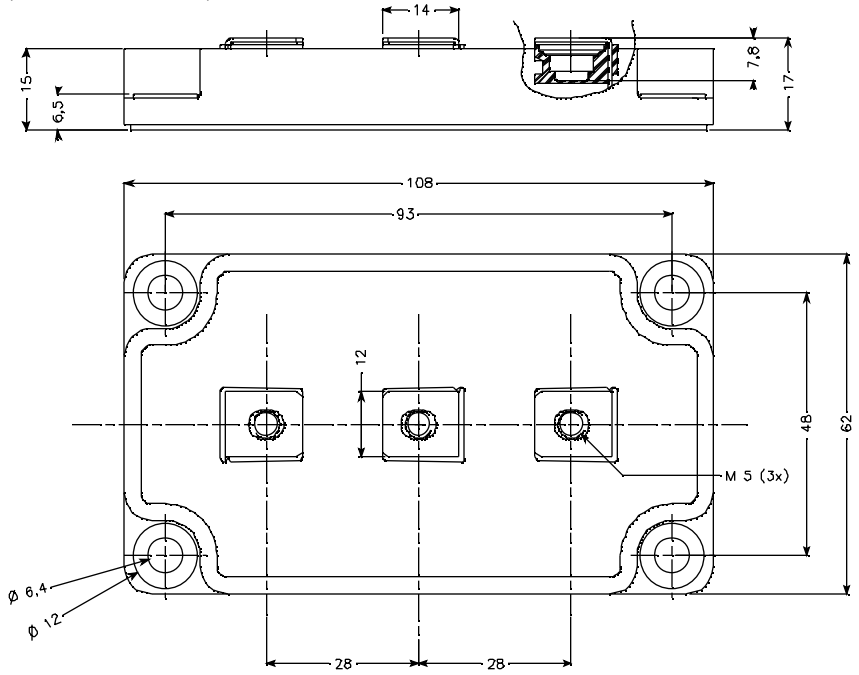
Dynamic Characteristics

Symbol	*Characteristic*	*Test Conditions*		*Min*	*Typ*	*Max*	*Unit*
t_{rr}	Reverse Recovery Time	I_F = 400A V_R = 900V di/dt = 4000A/µs	T_j = 25°C		572		ns
			T_j = 125°C		704		
Q_{rr}	Reverse Recovery Charge		T_j = 25°C		80		µC
			T_j = 125°C		140		
I_{RRM}	Reverse Recovery Current		T_j = 25°C		280		A
			T_j = 125°C		400		

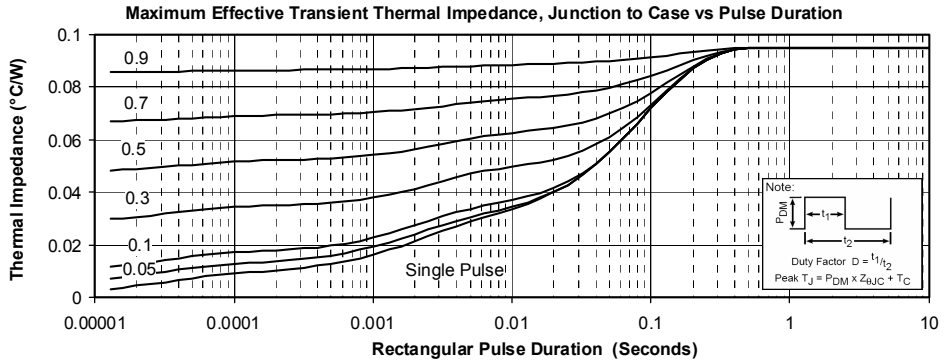
Thermal and package characteristics

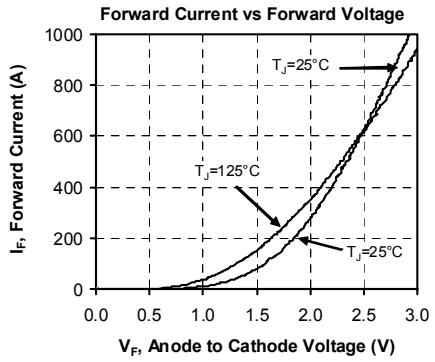
Symbol	*Characteristic*			*Min*	*Typ*	*Max*	*Unit*
R_{thJC}	Junction to Case					0.095	°C/W
V_{ISOL}	RMS Isolation Voltage, any terminal to case t =1 min, I isol<1mA, 50/60Hz			3400			V
T_J	Operating junction temperature range			-40		150	°C
T_{STG}	Storage Temperature Range			-40		125	
T_C	Operating Case Temperature			-40		100	
Torque	Mounting torque	To heatsink	M6	3		5	N.m
		For terminals	M5	2		3.5	
Wt	Package Weight					280	g

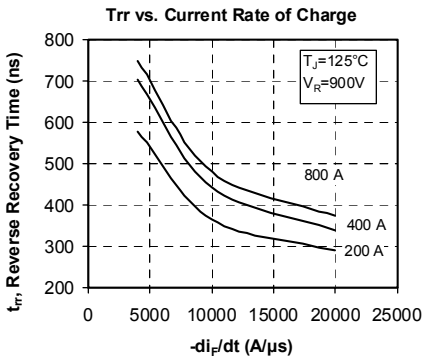
Package outline (dimensions in mm)

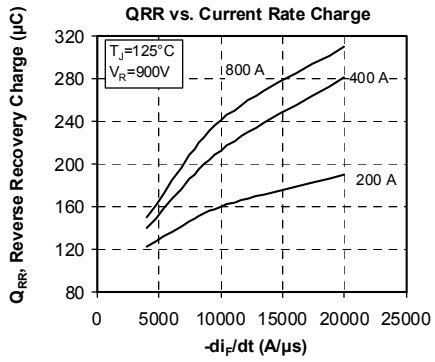


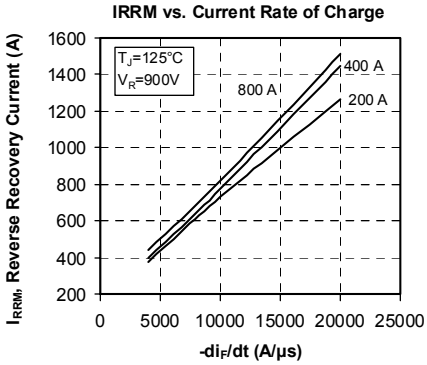
Typical Performance Curve

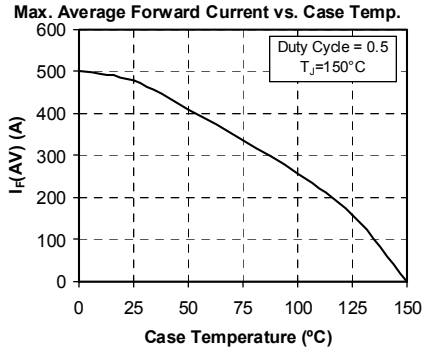












APT reserves the right to change, without notice, the specifications and information contained herein

APT's products are covered by one or more of U.S patents 4,895,810 5,045,903 5,089,434 5,182,234 5,019,522 5,262,336 6,503,786 5,256,583 4,748,103 5,283,202 5,231,474 5,434,095 5,528,058 and foreign patents. U.S and Foreign patents pending. All Rights Reserved.