

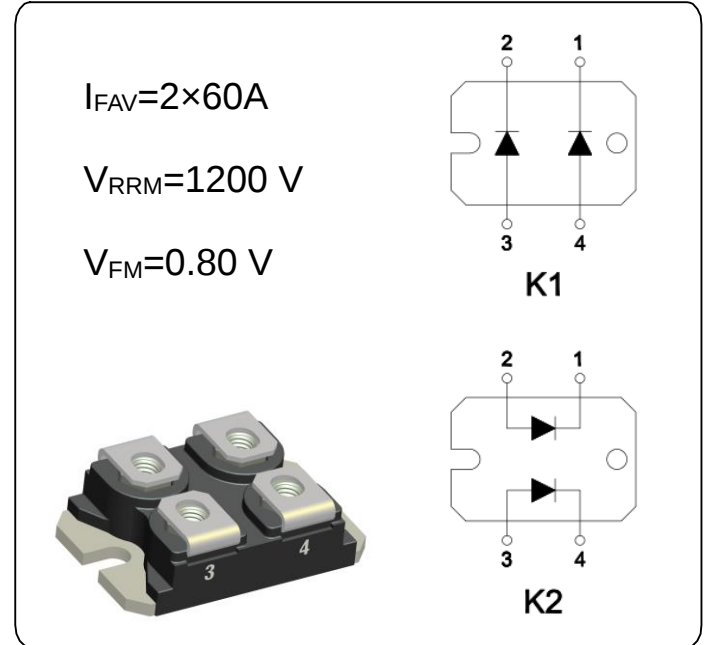
CK1D/CK2D120– 12

Standard Recovery Diodes Module, 2×60A

RoHS
COMPLIANT

Features

- Two fully independent diodes
- Fully insulated package
- With high operation junction temperature (175°C T_J)
- Lo forward voltage drop
- Optimized for power conversion:welding and industrial SMPS applications
- Easy to use and parallel
- Industry standard outline
- Designed and qualified for industrial level



Absolute Maximum Ratings

Parameters	Symbol	Test Conditions		Max.	Units
Cathode to anode voltage	V _R			1200	V
Continuous forward current per diode	I _F	T _C =100°C		60	A
Single pulse forward current per diode	I _{FSM}	T _C =25°C		1200	A
RMS isolation voltage	V _{ISOL}	50/60Hz, RMS, I _{isol} <1mA	1sec	3500	V
			1min	2500	V
Maximum junction temperature	T _J			-40~+175	°C
Maximum case temperature	T _J			150	°C
Storage temperture	T _{stg}			-40~+150	°C

Electrical Specifications

Parameters	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Cathode to anode breakdown voltage	V_{BR}	$I_R=100\mu A$	1200	-	-	V
Forward voltage	V_{FM}	$I_F=60A$; $T_{VJ}=25^{\circ}C$		0.95	1.0	
		$I_F=60A$; $T_{VJ}=125^{\circ}C$		0.80	0.85	
Reverse leakage current	I_{RM}	$V_R=V_{RRM}$; $T_{VJ}=25^{\circ}C$			10	μA
		$V_R=V_{RRM}$; $T_{VJ}=175^{\circ}C$			5	mA

Thermal-Mechanical Specifications

Parameters	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Junction to case ,single leg conducting	$R_{th(J-C)}$	Per diode			0.56	$^{\circ}\text{C/W}$
Junction to case ,both leg conducting					0.28	
Case to heatsink	R_{thCS}	Module		0.075		
Mounting torque	Mt	To terminals(M4)	1.1	1.3	1.5	Nm
	Ms	To heatsink(M4)	1.1	1.3	1.5	
Module(Approximately)	Weight				30	g
Case style			SOT-227			

Performance Curves

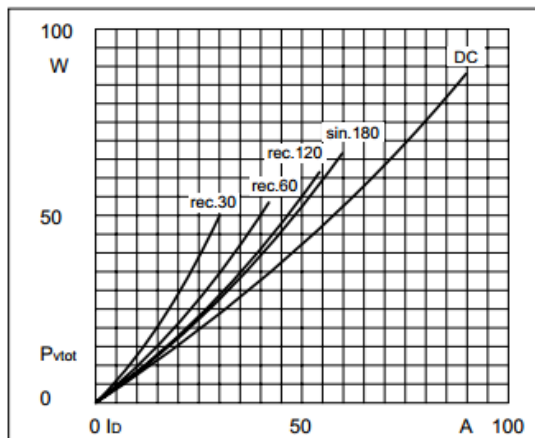


Fig1. Power dissipation

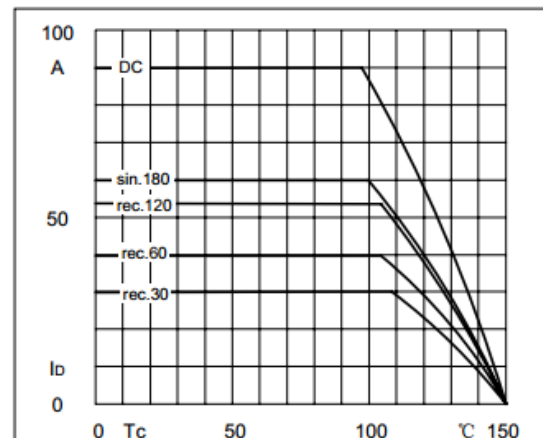


Fig2. Forward Current Derating Curve

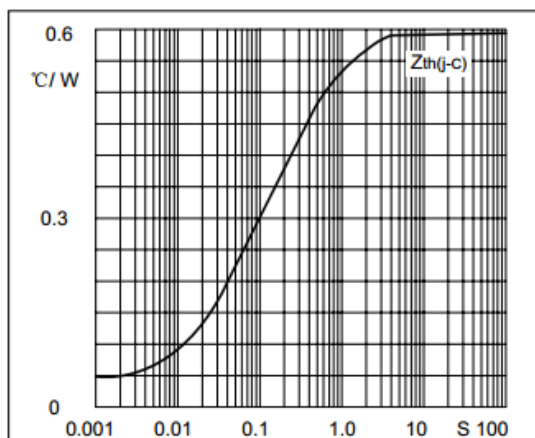


Fig3. Transient thermal impedance

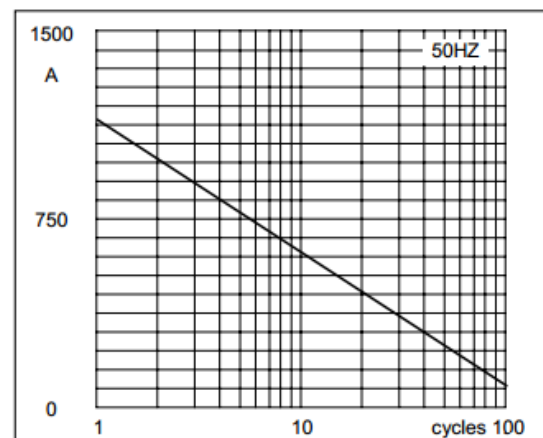


Fig4. Max Non-Repetitive Forward Surge Current

CK1D/CK2D120 – 12

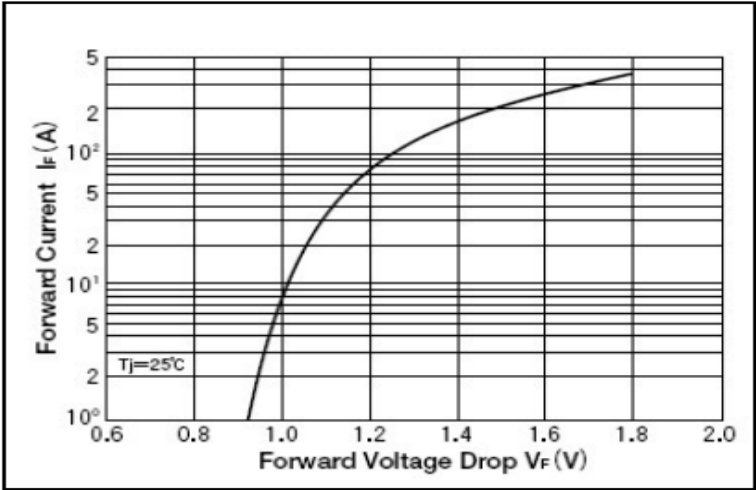
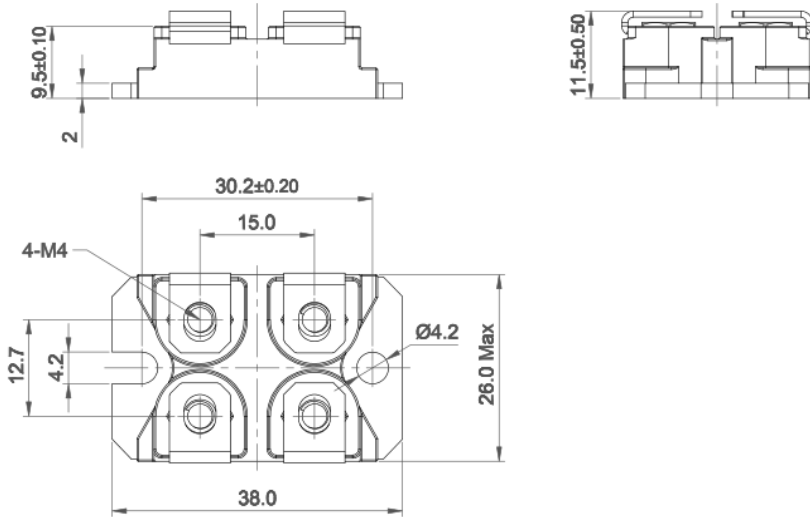


Fig5. Forward Characteristics

Ordering Information Tabel	
Device code	
	C K2 D 120 - 12
power module	C
Circuit configuration	K2
K1=2 separate diodes, syntropy pin-out	
K2=2 separate diodes, parallel pin-out	
“D” for Standard Recovery Diodes	D
Maximum average forward current (2×60A)	120
Voltage rating (12= 1200V)	12

Package Outline Information	
SOT-227 Package	
 Top view dimensions: 30.2±0.20, 15.0, 38.0, 12.7, 4.2, 4-M4, Ø4.2, 26.0 Max. Side view dimensions: 9.5±0.10, 2, 11.5±0.50.	
Dimensions in mm	