Technical Data
Data Sheet N2206, Rev.-

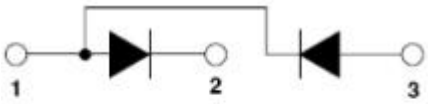
SM165KD800G2 SM165KJ800G2 SM165KE800G2
SCHOTTKY RECTIFIER

T2

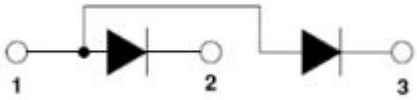
Features

- Heat transfer through aluminum oxide DBC Ceramic isolated metal baseplate
- Industrial standard package
- Thick copper baseplate
- 2500 VRMS isolating voltage
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



SM165KD800G2



SM165KJ800G2

SM165KE800G2

Applications

- Power Supplies
- AC&DC Motor Drivers
- Bridge Circuits
- Welders
- Battery Supplier

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	800	V
State the average current	$I_{F(AV)}$	Single phase ,half wave 180°conduction Tc=85℃	165	A
Surge forward current	I_{FSM}	t=10mS T_J =45℃	6000	A
Maximum I^2t for fusing	I^2t	t=10mS T_J =45℃	180000	A^2s

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Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop(per leg)*	V_{F1}	@ 165A, Pulse, T_J = 25 °C	1.05	1.25	V
Reverse Current(per leg)*	I_{R1}	@V_R = rated V_R T_J = 25 °C	-	20	uA
	I_{R2}	@V_R = rated V_R T_J = 150°C	-	5	mA
Isolation Breakdown Voltage(R.M.S)	Visol	Ac.50H_Z; R.M.S;1min	-	2500	V
		Ac.50H_Z; R.M.S; 1sec	-	3500	

* Pulse width < 300 μs, duty cycle < 2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-40~+150	°C
Storage Temperature	T_{stg}	-	-40~+150	°C
Maximum internal thermal resistance, junction to case per leg	$R_{th(J-C)}$	Per diode	0.21	°C/W
Typical thermal resistance, case to heatsink per module	$R_{th(C-S)}$	Module	0.05	°C/W
Mounting Torque	Mt	To terminals(M6)	5±15%	Nm
	Ms	To heatsink(M6)	5±15%	
Module(Approximately)	Weight		160	g

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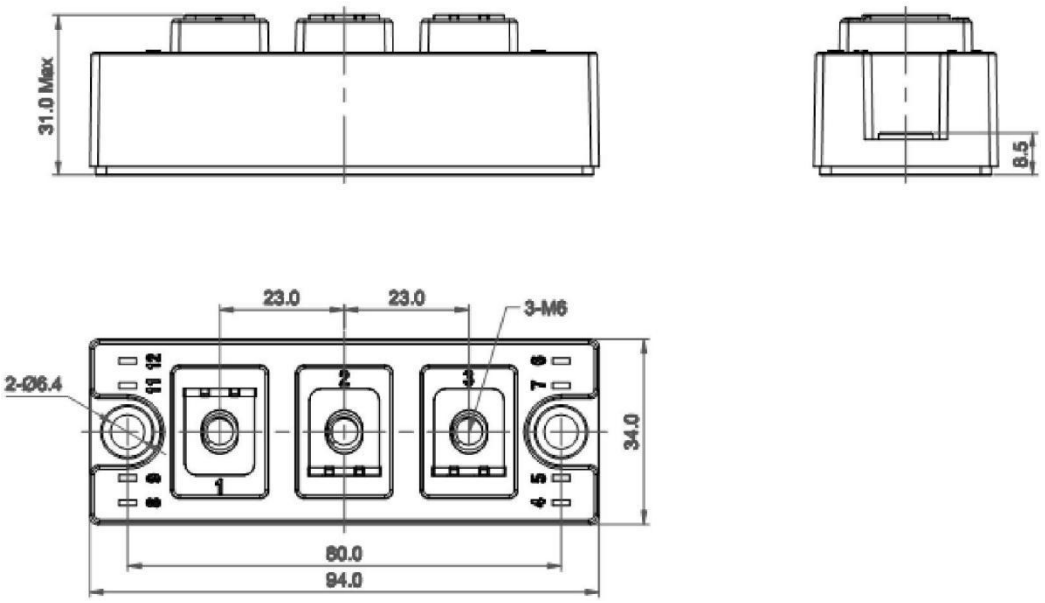
Mechanical Dimensions T2 (Millimeters)



Ordering Information

Device	Package	Shipping
SM165KD800G2 SM165KJ800G2 SM165KE800G2	T2	10pcs/ box

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram

Where XXXX is YYWW

SM165KD800G2/SM165KJ800G2/SM165KE800G2	= Part name
SS	= SS
YY	= Year
WW	= Week

Cautions: Molding resin
Epoxy resin UL:94V-0

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