

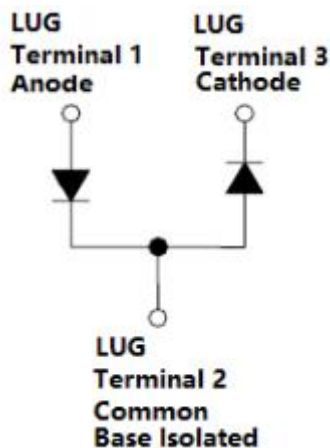
603DNQ100C2 SCHOTTKY RECTIFIER



Features

- 175 °C T_J operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Base plate: Nickel plated; Terminals: Nickel plated
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Applications

- High current switching power supply
- Plating power supply
- Free-Wheeling diodes
- Reverse battery protection
- Converters
- UPS System
- Welding

Maximum Ratings(limiting values, at 25 °C unless otherwise specified)

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage	V _{RRM}	-	100	V
Working Peak Reverse Voltage	V _{RWM}			
DC Blocking Voltage	V _R			
Average Rectified Forward Current	I _{F(AV)}	T _c =122°C, I _n DC	300(Per Leg) 600(Per Device)	A
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	I _{FSM}	8.3ms, Half Sine pulse	6000	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop(Per Leg)*	V _{F1}	@300A, Pulse, T _J = 25°C	-	0.88	V
	V _{F2}	@300A, Pulse, T _J = 175°C	-	0.68	V
Reverse Current(Per Leg)*	I _{R1}	@V _R = rated V _R , T _J = 25°C	-	8	mA
	I _{R2}	@V _R = rated V _R , T _J = 125°C	-	75	mA
Junction Capacitance(Per leg)	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	-	9000	pF

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

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification		Units
Junction Temperature	T _J	-	-55 to +175		°C
Storage Temperature	T _{stg}	-	-55 to +175		°C
Typical Thermal Resistance Junction to Case(Per leg)	R _{θJC}	DC operation	0.20		°C/W
Typical Thermal Resistance Junction to Case(Per package)	R _{θJC}	DC operation	0.10		°C/W
Typical Thermal Resistance, case to Heat Sink	R _{θcs}	Mounting surface, smooth and greased	0.08		°C/W
Mounting Torque	Mt	-	To terminals(M6)	4(min) 5.8(max)	Nm
	Ms		To heatsink(M6)	4(min) 6(max)	
Approximate Weight	wt	-	85		g
Case Style	TO-244(plastic shell)				

Marking Diagram



Where XXXXX is YYWWL

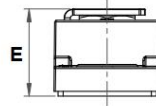
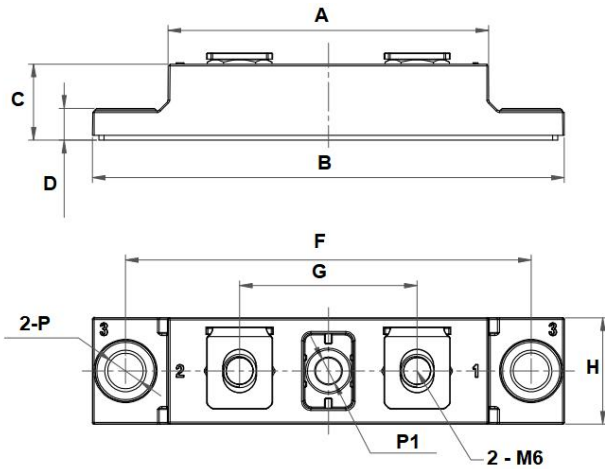
603DNQ100C2 = Part name
SS = SS
YY = Year
WW = Week
L = Lot Number

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

Ordering Information

Device	Package	Shipping
603DNQ100C2	TO-244(plastic shell)	15 pcs/box

Mechanical Dimensions TO-244(plastic shell)(Millimeters)



SYMBOL	Millimeters	
	Min.	Max.
A	63	64
B	93	94
C	15	15.5
D	6.6	7.0
E	-	17
F	79.5	80.5
G	34.5	35.5
H	20.5	21.5
ØP	6.8	7.4
ØP1	4.9	5.5

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