

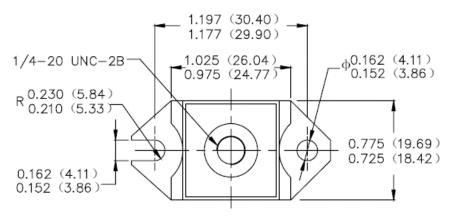
Technical Data Data Sheet N1792, Rev. B **Green Products**

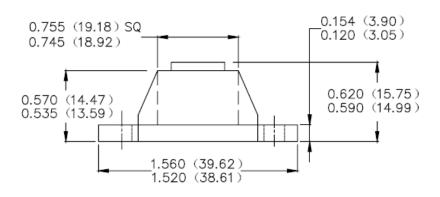
245NQ400(R)-1 Ultrafast Recovery Modules

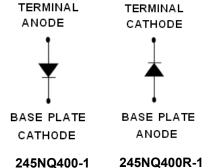
Features:

- Reduced RFI and EMI
- Reduced Snubbing
- Extensive Characterization of Recovery Parameters
- This is a Pb Free Device
- All SMC parts are traceable to the wafer lot
- · Additional testing can be offered upon request

Mechanical Dimensions: In Inches / mm







The top side is terminal, the bottom side is base plate.

PRM1-1(HALF PAK Module)

MARKING, MOLDING RESIN

Marking for 245NQ400/R-1, 1st row SS YYWWL, 2nd row 245NQ400-1/245NQ400R-1 Where YY is the manufacture year WW is the manufacture week code L is the wafer's Lot Number Molding resin

Epoxy resin UL:94V-0

- China Germany Korea Singapore United States
 - http://www.smc-diodes.com sales@ smc-diodes.com •



Technical Data Data Sheet N1792, Rev. B **Green Products**

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$egin{array}{c} egin{array}{c} \egin{array}{c} \egin{array}{c} \egin{array}{c} \egin{array}$	-	400	٧
Average Forward Current	I _{F(AV)}	50% duty cycle @T _C =100°C, rectangular wave form	240	Α
Peak One Cycle Non-Repetitive Surge Current (per leg)	I _{FSM}	8.3 ms, half Sine pulse	1600	Α

Electrical Characteristics:

Characteristics	Symbol	Condition	Тур.	Max.	Units
Forward Voltage Drop(per leg)*	V_{F1}	@ 135A, Pulse, TJ = 25 °C	0.968	-	V
	V_{F2}	@ 240A, Pulse, T _J = 25 °C	1.113	1.50	V
	V_{F3}	@ 270A, Pulse, T _J = 25 °C	1.177	-	V
Reverse Current (per leg) *	I _R	$@V_R = \text{rated } V_R T_J = 25 ^{\circ}\text{C}$	0.6	30	μΑ
Junction Capacitance (per leg)	Ст	$@V_R = 5V, T_C = 25 °C$ $f_{SIG} = 1MHz$	1350	2000	pF
Reverse Recovery Time	t _{rr}	I_F =0.5A, I_R =1A,and I_{RR} =0.25A	110	150	ns
	t _{rr}	I _F = 1.0A, dif /dt = 200A/μs, V _R = 30V	96	-	ns

^{*} Pulse Width < 300 μ s, Duty Cycle <2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification		Units		
Junction Temperature	T_J	-	-55 to +150		°C		
Storage Temperature	T _{stg}	-	-55 to +150		°C		
Typical Thermal Resistance Junction to Case	$R_{ heta JC}$	DC operation	0.50		°C/W		
Typical Thermal Resistance, case to Heat Sink	$R_{ heta cs}$	Mounting surface, smooth and greased	0.012		°C/W		
Mounting Torque	Тм	Non-lubricated threads	Mounting Torque Base	23(min) 29(max)	Kg-cm		
			Terminal Torque	35(min) 46(max)			
Approximate Weight	wt	-	25.6		g		
Case Style	PRM1-1						

[•] China - Germany - Korea - Singapore - United States •

[•] http://www.smc-diodes.com - sales@ smc-diodes.com •





Technical Data Data Sheet N1792, Rev. B

Green Products

DISCLAIMER:

- 1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the SMC Sangdest Microelectronics (Nanjing) Co., Ltd sales department for the latest version of the datasheet(s).
- 2- in cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.
- 3- In no event shall SMC Sangdest Microelectronics (Nanjing) Co., Ltd be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). SMC Sangdest Microelectronics (Nanjing) Co., Ltd assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.
- . 4- In no event shall SMC Sangdest Microelectronics (Nanjing) Co., Ltd be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
- 5- No license is granted by the datasheet(s) under any patents or other rights of any third party or SMC Sangdest Microelectronics (Nanjing) Co., Ltd.
- 6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC Sangdest Microelectronics (Nanjing) Co., Ltd.
- 7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations..