

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

Circuit Diagram



Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	400	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 100^\circ\text{C}$, rectangular wave form	240	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	1600	A

Electrical Characteristics:

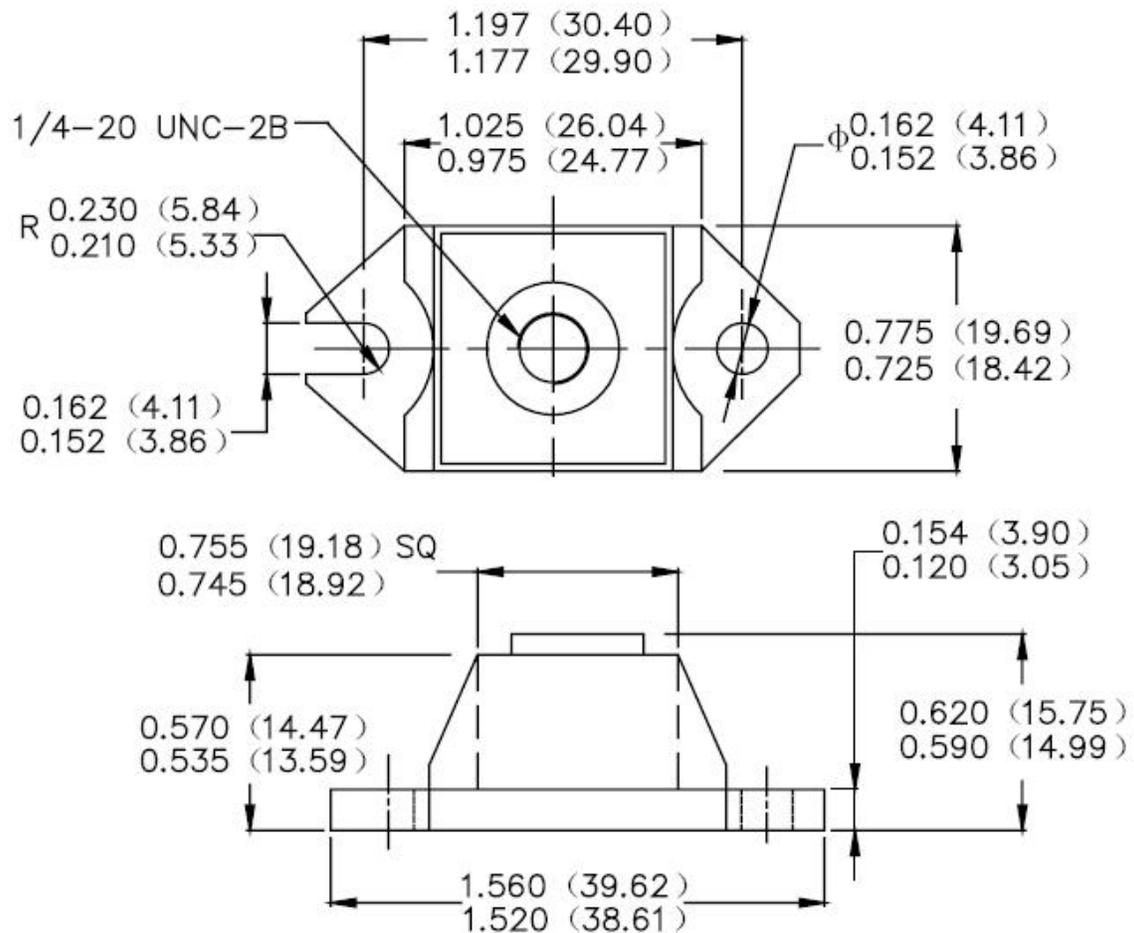
Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 135A, Pulse, $T_J = 25^\circ\text{C}$	0.968	-	V
	V_{F2}	@ 240A, Pulse, $T_J = 25^\circ\text{C}$	1.113	1.50	V
	V_{F3}	@ 270A, Pulse, $T_J = 25^\circ\text{C}$	1.177	-	V
Reverse Current *	I_R	@ $V_R = \text{rated } V_R$, $T_J = 25^\circ\text{C}$	0.6	30	μA
Junction Capacitance	C_T	@ $V_R = 5\text{V}$, $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	1350	2000	pF
Reverse Recovery Time	t_{rr}	$I_F = 0.5\text{A}$, $I_R = 1\text{A}$, and $I_{RR} = 0.25\text{A}$	110	150	ns
	t_{rr}	$I_F = 1.0\text{A}$, $dif/dt = 200\text{A}/\mu\text{s}$, $V_R = 30\text{V}$	96	-	ns

* Pulse width < 300 μs , 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 _{θJC}	DC operation	0.20	°C/W	
Typical Thermal Resistance, case to Heat Sink	R _{θcs}	Mounting surface, smooth and greased	0.15	°C/W	
Mounting Torque	T _M	Non-lubricated threads	Mounting Torque	23(min) 29(max)	Kg-cm
			Terminal Torque	35(min) 46(max)	
Approximate Weight	wt	-	25.6	g	
Case Style	PRM1-1				

Mechanical Dimensions PRM1-1 (Inches/Millimeters)



Technical Data
Data Sheet N1792, Rev. A



Ordering Information

Device	Package	Shipping
245NQ400(R)-1	PRM1-1(Pb-Free)	27pcs/ 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

1st row SS YYWW
2nd row 245NQ400-1
SS = SS
YY = Year
WW = Week

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

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