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SCHOTTKY RECTIFIER 160CMQ

160 Amp

Voltage Ratings

	Part number	160CMQ035	160CMQ040	160CMQ045
V_R	Max. DC Reverse Voltage (V)	35	40	45
V_{RWM}	Max. Working Peak Reverse Voltage (V)			

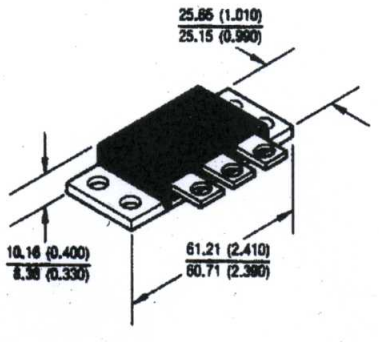
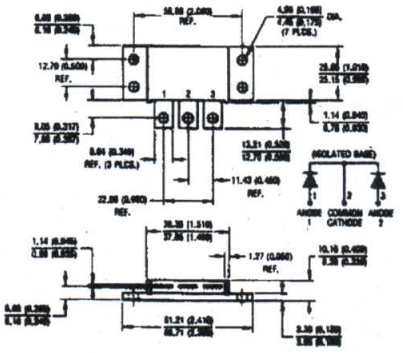
Absolute Maximum Ratings

	Parameters	160CMQ	Units	Conditions	
$I_{F(AV)}$	Max. Average Forward Current * See Fig. 5	160	A	50% duty cycle @ T_C = 69 °C, rectangular wave form	
I_{FSM}	Max. Peak One Cycle Non-Repetitive Surge Current (Per Leg) * See Fig. 7	6400	A	5µs Sine or 3µs Rect. pulse	Following any rated load condition and with rated V_{RRM} applied
		750		10ms Sine or 6ms Rect. pulse	
E_{AS}	Non-Repetitive Avalanche Energy (Per Leg)	108	mJ	T_J = 25 °C, I_{AS} = 16 Amps, L = 0.84 mH	
I_{AR}	Repetitive Avalanche Current (Per Leg)	16	A	Current decaying linearly to zero in 1 µsec Frequency limited by T_J max. $V_A = 1.5 \times V_R$ typical	

Electrical Specifications

	Parameters	160CMQ	Units	Conditions	
V_{FM}	Max. Forward Voltage Drop (Per Leg) * See Fig. 1 (1)	0.64	V	@ 80A	T_J = 25 °C
		0.86	V	@ 160A	
		0.60	V	@ 80A	T_J = 125 °C
		0.76	V	@ 160A	
I_{RM}	Max. Reverse Leakage Current (Per Leg) * See Fig. 2 (1)	5	mA	T_J = 25 °C	V_R = rated V_R
		200	mA	T_J = 125 °C	
C_T	Max. Junction Capacitance (Per Leg)	2600	pF	$V_R = 5V_{DC}$ (test signal range 100Khz to 1Mhz) 25°C	
L_S	Typical Series Inductance (Per Leg)	8.0	nH	Measured from terminal hole to terminal hole	
dv/dt	Max. Voltage Rate of Change (Rated V_R)	10,000	V/ µs		

(1) Pulse Width < 300µs, Duty Cycle <2%

Thermal-Mechanical Specifications

	Parameters		160CMQ	Units	Conditions
T_J	Max. Junction Temperature Range		-55 to 150	°C	
T_{stg}	Max. Storage Temperature Range		-55 to 150	°C	
R_{thJC}	Max. Thermal Resistance Junction to Case (Per Leg)		1.0	°C/W	DC operation
R_{thJC}	Max. Thermal Resistance Junction to Case (Per Package)		0.50	°C/W	DC operation
R_{thCS}	Typical Thermal Resistance, Case to Heatsink		0.10	°C/W	Mounting surface, smooth and greased
wt	Approximate Weight		58 (2.0)	g (oz.)	
T	Mounting Torque	Min.	40 (35)	Kg-cm (lbf-in)	
		Max.	58 (50)