TECHNICAL DATA
DATASHEET 5378, REV. C

THREE PHASE FULL WAVE BRIDGE RECTIFIER ASSEMBLY WITH AlSiC TECHNOLOGY

DESCRIPTION: 1400 V, 45 A, 850 nsec THREE PHASE BRIDGE RECTIFIER ASSEMBLY
MAX. RATINGS / ELECTRICAL CHARACTERISTICS All ratings are at $T_A = 25^oC$ unless otherwise specified.

RATING	CONDITIONS	MIN	TYP	MAX	UNIT
Non-Repetitive Peak Inverse Voltage (PIV)	$T_J = -55^oC$	1400	-	-	Vdc
Repetitive Peak Inverse Voltage (PIV)	$T_J = -40^oC$	1400	-	-	Vdc
Average DC Output Current (T_C = Case Temp) (I_o)	$T_C = 55^oC$ $T_C = 100^oC$ $T_C = 125^oC$	-	-	45 28 16	A
Average DC Output Current (T_A = Ambient Temp) (no heat sink) (I_o)	$T_A = 25^oC$ $T_A = 55^oC$ $T_A = 100^oC$	-	-	8.0 5.0 2.5	A
Peak Single Cycle Surge Current (I_{FSM})	t =1.25ms single square wave T_C = 25°C T_C =150°C t = 8.3ms 60Hz single pulse sine wave T_C =25°C T_C =150°C	 400	 700 570 325		A
Energy Rating I^2t	T =1.25ms single square wave T_C = 25°C T_C =150°C		 612 405		A^2s
Junction temperature Case temperature Material temperature	T_J T_{OP} T_{STG}	-55 -55 -55		+175 +150 +150	^0C
Maximum Forward Voltage (V_F) (300 μs pulse, duty cycle < 2%)	$T_C = 25^0C$, I_F = 9A $T_C = 25^0C$, I_F = 45A $T_C = 125^0C$, I_F = 9A $T_C = 125^0C$, I_F = 45A	-	-	1.30 1.90 1.15 1.85	V
Maximum Instantaneous Reverse Current at Rated PIV	$T_A = 25^0C$ $T_A = 100^0C$	-	-	10 100	μA
Reverse Recovery Time (t_{RR})	I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A, $T_C = 25^0C$	-	-	850	nsec
Junction Capacitance (C_J)	V_R =100V, f= 1MHz	-	40	-	pF
Thermal Resistance (θ_{JL})	Per Leg	-	-	4.0	°C/W

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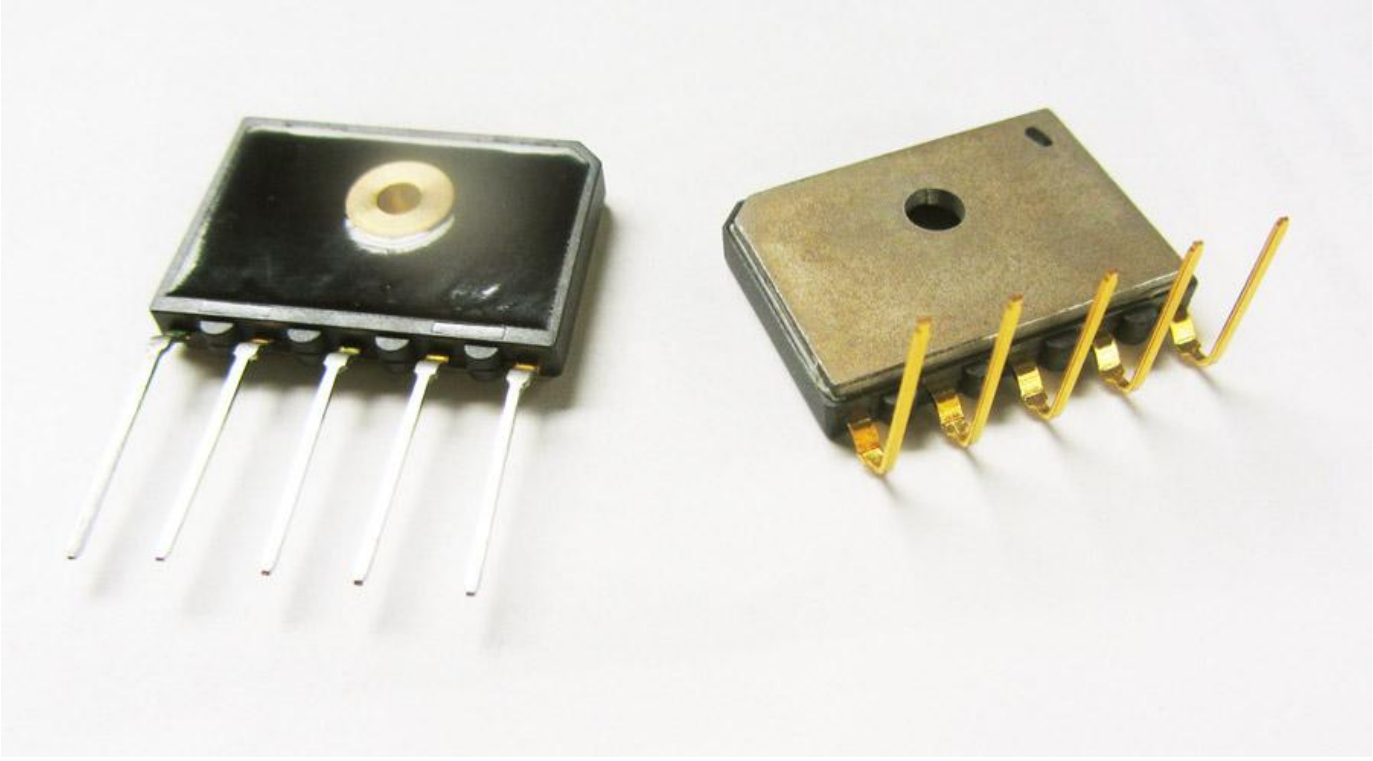
Mechanical Characteristics:

RATING	CONDITIONS	MIN	TYP	MAX	UNIT
Isolation Voltage	All Leads - Base Plate 60Hz, 60S	-	2000	-	V
Mounting Torque	20^0C	-	10	-	In-lb.
Max Acceleration	-	-	-	50	m/s2
Weight	-	-	16	-	gms
Life thermal Cycling (Qualification test only)	-40^0C to 125^0C	-	750	-	Cycles

Note: Add a suffix S to the part number for S-100 Screening.

Lend Bend Options:

SBR1002A Straight Leads
SBR1002A-1 Leads Bent Down
SBR1002A-2 Leads Bent Up



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MECHANICAL DIMENSIONS: In Inches