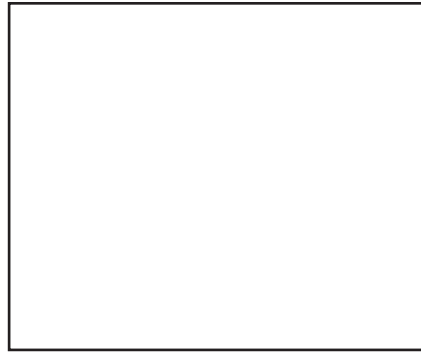
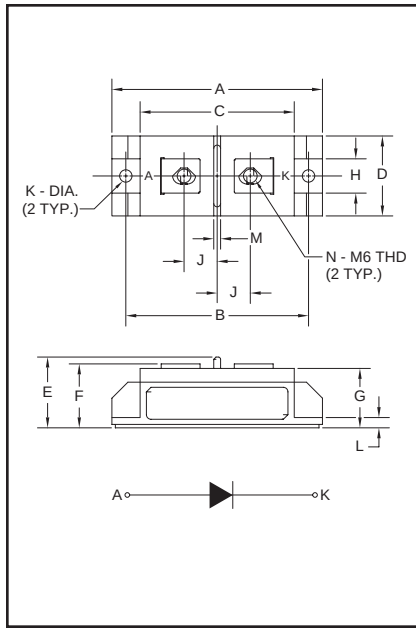




300 Amperes/1200 Volts



Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (724) 925-7272

CS641230

Fast Recovery Single Diode Module

300 Amperes/1200 Volts

Absolute Maximum Ratings

Characteristics	Symbol	CS641230	Units
Peak Reverse Blocking Voltage	V_{RRM}	1200	Volts
Transient Peak Reverse Blocking Voltage (Non-Repetitive), $t < 5\text{ms}$	V_{RSM}	1350	Volts
DC Reverse Blocking Voltage	$V_{R(DC)}$	960	Volts
DC Current, $T_C = 75^\circ\text{C}$	$I_{F(DC)}$	300	Amperes
Peak Half-Cycle Surge (Non-Repetitive) On-State Current (60Hz)	I_{FSM}	3000	Amperes
I^2t (for Fusing), 8.3 milliseconds	I^2t	37500	A^2sec
Junction Temperature	T_J	-40 to 150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-40 to 125	$^\circ\text{C}$
Maximum Mounting Torque M5 Mounting Screw	$\tilde{N}$	17	in.-lb.
Maximum Mounting Torque M6 Terminal Screw	$\tilde{N}$	26	in.-lb.
Module Weight (Typical)	$\tilde{N}$	200	Grams
V Isolation	V_{RMS}	2500	Volts



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Electrical and Thermal Characteristics, $T_j = 25^\circ\text{C}$ unless otherwise specified

Characteristics	Symbol	Test Conditions	CS641230	Units
Blocking State Maximums				
Reverse Leakage Current, Peak	I_{RRM}	$T_j = 150^\circ\text{C}$, $V_{RRM} = \text{Rated}$	40	mA
Conducting State Maximums				
Peak On-State Voltage	V_{FM}	$I_{FM} = 300\text{A}$, $T_j = 25^\circ\text{C}$	1.5	Volts
Switching Maximums				
Reverse Recovery Time	t_{rr}	$I_{FM} = 300\text{A}$, $T_j = 150^\circ\text{C}$ $di/dt = -600\text{A}/\mu\text{s}$, $V_R = 600\text{V}$	0.8	μs
Reverse Recovery Charge	Q_{rr}	$I_{FM} = 300\text{A}$, $T_j = 150^\circ\text{C}$ $di/dt = -600\text{A}/\mu\text{s}$, $V_R = 600\text{V}$	80	μC
Thermal Maximums				
Thermal Resistance, Junction-to-Case	$R_{\theta(J-C)}$	Per Module	0.2	$^\circ\text{C}/\text{Watt}$
Thermal Resistance, Case-to-Sink (Lubricated)	$R_{\theta(C-S)}$	Per Module	0.15	$^\circ\text{C}/\text{Watt}$
Isolation Resistance, Main Terminal-to-Case	$\bar{N}$	Per Module	10 (minimum)	$\text{m } \Omega$

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