



**Voltage Ratings**

Part number	35CGQ150
V <sub>R</sub> Max. DC Reverse Voltage (V) (Per Leg)	150
V <sub>RWM</sub> Max. Working Peak Reverse Voltage (V) (Per Leg)	

**Absolute Maximum Ratings**

Parameters	Limits	Units	Conditions
I <sub>F(AV)</sub> Max. Average Forward Current See Fig. 5	35	A	50% duty cycle @ T <sub>C</sub> = 115°C, square waveform
I <sub>FSM</sub> Max. Peak One Cycle Non - Repetitive Surge Current (Per Leg)	400	A	@ t <sub>p</sub> = 8.3 ms half-sine

**Electrical Specifications**

Parameters	Limits	Units	Conditions	
V <sub>FM</sub> Max. Forward Voltage Drop (Per Leg) See Fig. 1 ①	1.05	V	@ 17.5A	T <sub>J</sub> = -55°C
	1.29	V	@ 35A	
	0.93	V	@ 17.5A	T <sub>J</sub> = 25°C
	1.18	V	@ 35A	
	0.80	V	@ 17.5A	T <sub>J</sub> = 125°C
	1.07	V	@ 35A	
I <sub>RM</sub> Max. Reverse Leakage Current (Per Leg) See Fig. 2 ①	0.1	mA	T <sub>J</sub> = 25°C	V <sub>R</sub> = rated V <sub>R</sub>
	16	mA	T <sub>J</sub> = 125°C	
C <sub>T</sub> Max. Junction Capacitance (Per Leg)	800	pF	V <sub>R</sub> = 5V <sub>DC</sub> (1MHz, 25°C)	
L <sub>S</sub> Typical Series Inductance (Per Leg)	7.8	nH	Measured from anode lead to cathode lead 6mm (0.025 in.) from package	

**Thermal-Mechanical Specifications**

Parameters	Limits	Units	Conditions	
T <sub>J</sub> Max. Junction Temperature Range	-55 to 150	°C		
T <sub>stg</sub> Max. Storage Temperature Range	-55 to 150	°C		
R <sub>thJC</sub> Max. Thermal Resistance, Junction to Case (Per Leg)	1.25	°C/W	DC operation	See Fig. 4
R <sub>thJC</sub> Max. Thermal Resistance, Junction to Case (Per Package)	0.63	°C/W	DC operation	
wt Weight (Typical)	9.3	g		
Die Size (Typical)	158X158	mils		
Case Style	TO-254AA			

① Pulse Width &lt; 300μs, Duty Cycle &lt; 2%

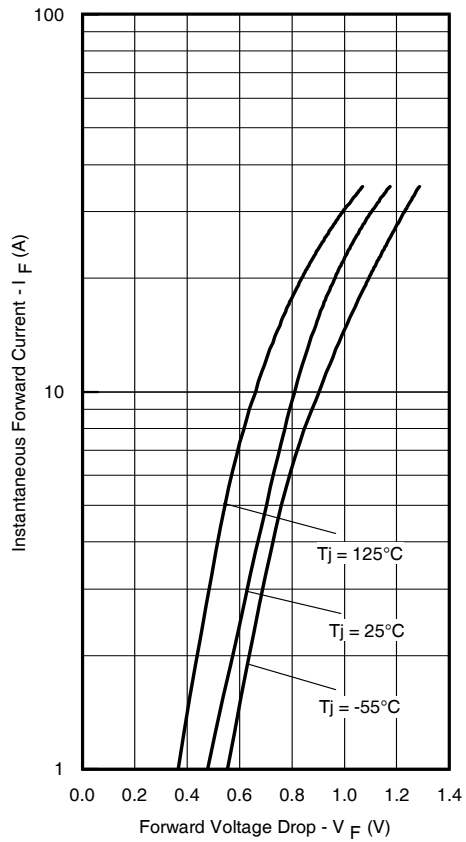


Fig. 1 - Max. Forward Voltage Drop Characteristics (Per Leg)

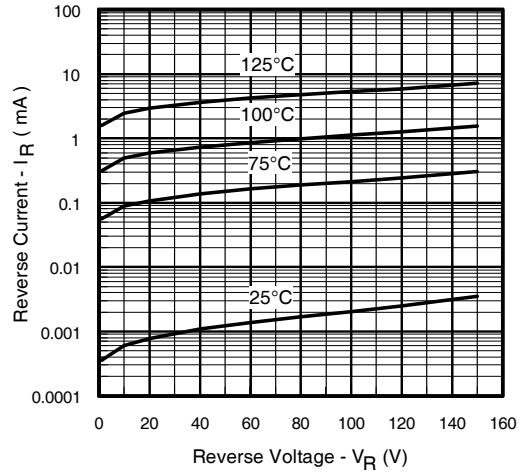


Fig. 2 - Typical Values of Reverse Current Vs. Reverse Voltage (Per Leg)

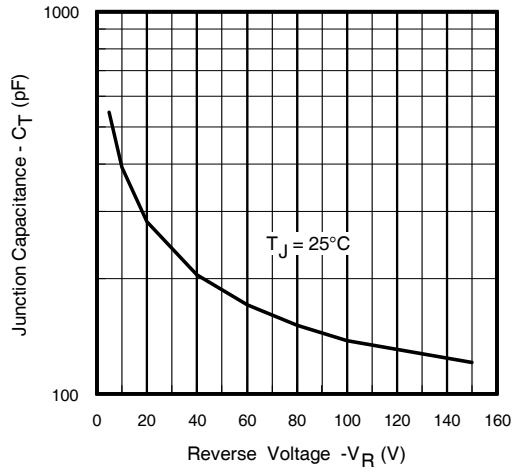


Fig. 3 - Typical Junction Capacitance Vs. Reverse Voltage (Per Leg)

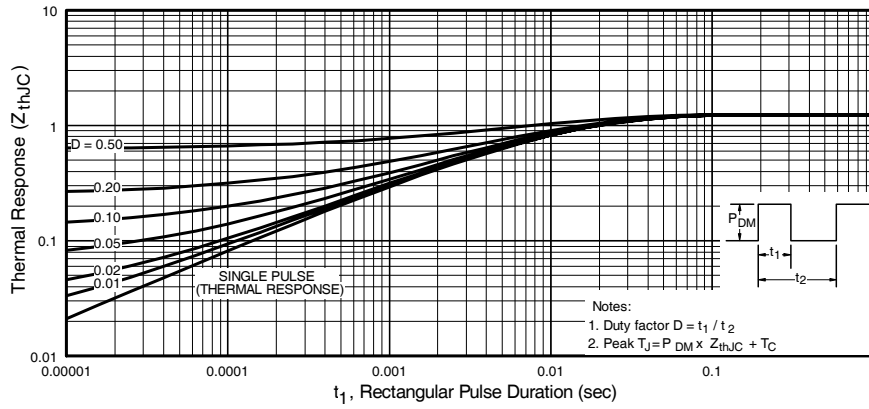


Fig. 4 - Max. Thermal Impedance  $Z_{thJC}$  Characteristics (Per Leg)

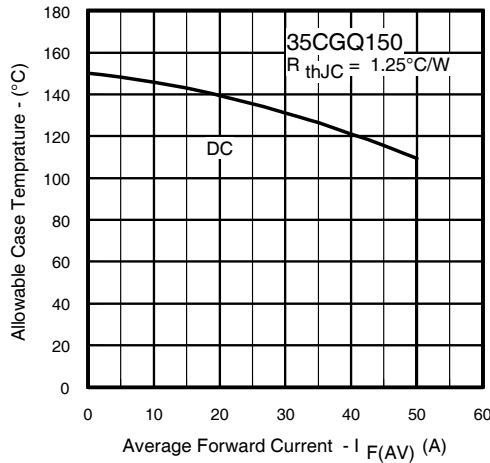


Fig. 5 - Max. Allowable Case Temperature Vs. Average Forward Current (Per Leg)