Voltage Ratings

	Part number	1N7039CCT1
V_R	Max. DC Reverse Voltage (V) (Per Leg)	150
V_{RWM}	Max. Working Peak Reverse Voltage (V) (Per Leg)	

Absolute Maximum Ratings

	Parameters	Limits	Units	Conditions
$I_{F(AV)}$	Max. Average Forward Current See Fig. 5	35	A	50% duty cycle @T_C = 74°C, square waveform
I_{FSM}	Max. Peak One Cycle Non - Repetitive Surge Current (Per Leg)	180	A	@ t_p = 8.3 ms half-sine

Electrical Specifications

	Parameters	Limits	Units	Conditions	
V_{FM}	Max. Forward Voltage Drop (Per Leg) See Fig. 1①	1.35	V	@15A	T_J = -55°C
		1.13	V	@15A	T_J = 25°C
		1.60	V	@35A	
		0.86	V	@15A	T_J = 125°C
		1.20	V	@35A	
I_{RM}	Max. Reverse Leakage Current (Per Leg) See Fig. 2 ①	0.5	mA	T_J = 25°C	V_R = rated V_R
		15	mA	T_J = 125°C	
C_T	Max. Junction Capacitance (Per Leg)	350	pF	V_R = 5V_{DC} (1MHz, 25°C)	
L_S	Typical Series Inductance (Per Leg)	6.7	nH	Measured from anode lead to cathode lead 6mm (0.025 in.) from package.	

Thermal-Mechanical Specifications

	Parameters	Limits	Units	Conditions
T_J	Max.Junction Temperature Range	-65 to 150	°C	
T_{stg}	Max. Storage Temperature Range	-65 to 150	°C	
R_{thJC}	Max. Thermal Resistance, Junction to Case (Per Leg)	1.9	°C/W	DC operation See Fig. 4
R_{thJC}	Max. Thermal Resistance, Junction to Case (Per Package)	0.95	°C/W	DC operation
wt	Weight (Typical)	9.3	g	
	Die Size	125X125	mils	
	Case Style	TO-254AA		

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

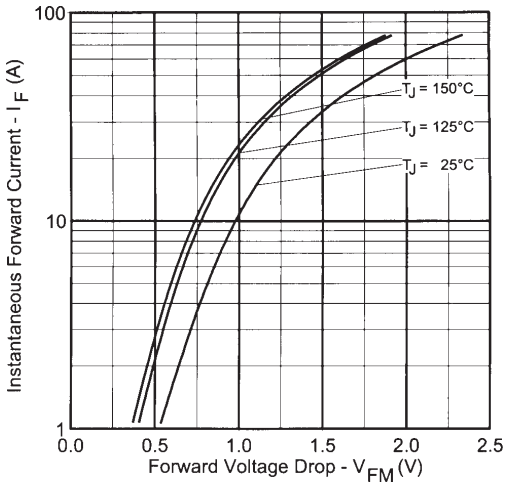

Fig. 1 - Max. Forward Voltage Drop Characteristics (Per Leg)

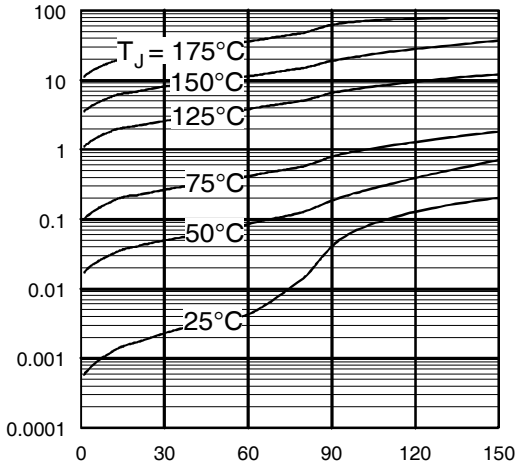

Fig. 2 - Typical Values of Reverse Current Vs. Reverse Voltage (Per Leg)

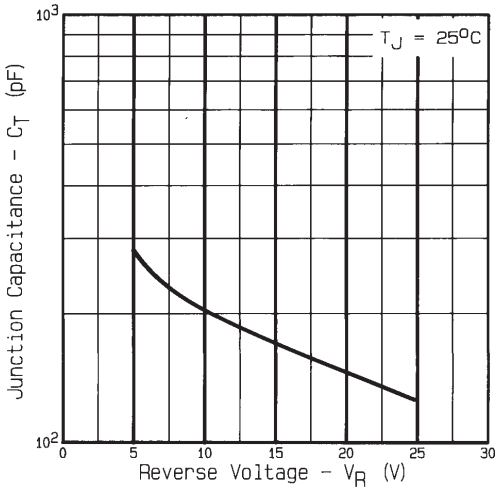

Fig. 3 - Typical Junction Capacitance Vs. Reverse Voltage (Per Leg)

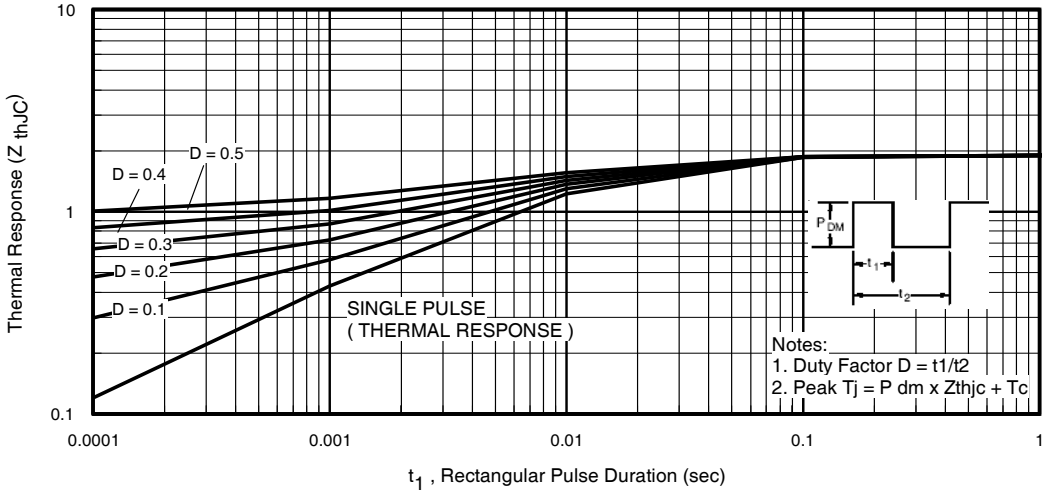

Fig. 4 - Max. Thermal Impedance Z_{thJC} Characteristics (Per Leg)

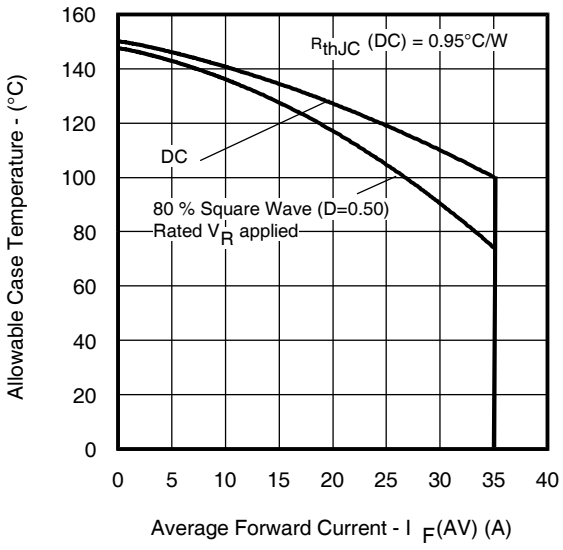

Fig. 5 - Max. Allowable Case Temperature Vs.
Average Forward Current (Per Package)

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