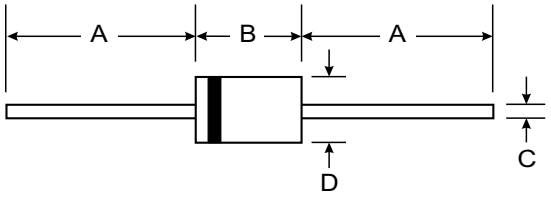
21DQ06

2.0A Axial Leaded Schottky Rectifier

Features

- Low profile, axial leaded outline
- High frequency operation
- Very low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Lead (Pb)-free plating
- Designed and qualified for industrial level



DO-15		
Dim	**Min**	**Max**
A	25.40	—
B	5.50	7.62
C	0.686	0.889
D	2.60	3.60
All Dimensions in mm		

Mechanical Data

- Case: Molded Plastic

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

PARAMETER	SYMBOL	TEST CONDITIONS		VALUES	UNITS
Maximum average forward current See fig. 4	$I_{F(AV)}$	50 % duty cycle at T_C = 106 °C, rectangular waveform		2	A
Maximum peak one cycle non-repetitive surge current See fig. 6	I_{FSM}	5 µs sine or 3 µs rect. pulse	Following any rated load condition and with rated V_{RRM} applied	340	
		10 ms sine or 6 ms rect. pulse		60	
Non-repetitive avalanche energy	E_{AS}	T_J = 25 °C, I_{AS} = 1 A, L = 8 mH		4.0	mJ
Repetitive avalanche current	I_{AR}	Current decaying linearly to zero in 1 µs Frequency limited by T_J maximum V_A = 1.5 x V_R typical		0.5	A

SYMBOL	CHARACTERISTICS	VALUES	UNITS
$I_{F(AV)}$	Rectangular waveform	2	A
V_{RRM}		60	V
V_F	2 Apk, T_J = 125 °C	0.55	
T_J	Range	- 40 to 150	°C

Note

(1) Pulse width < 300 µs, duty cycle < 2 %

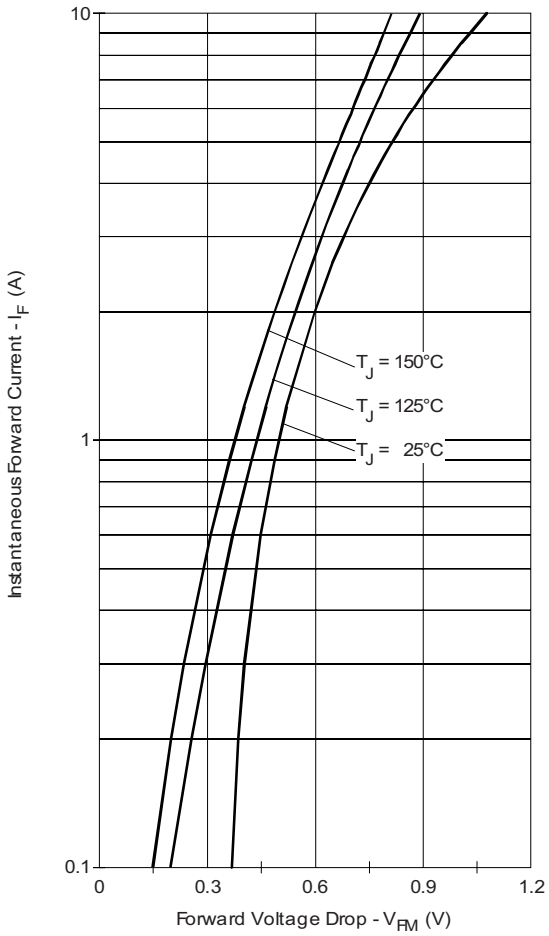


Fig. 1 - Maximum Forward Voltage Drop Characteristics

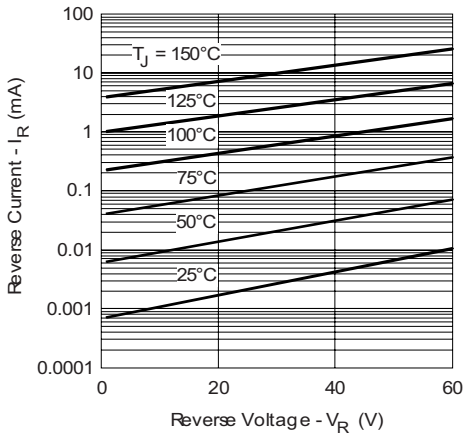


Fig. 2 - Typical Values of Reverse Current vs. Reverse Voltage

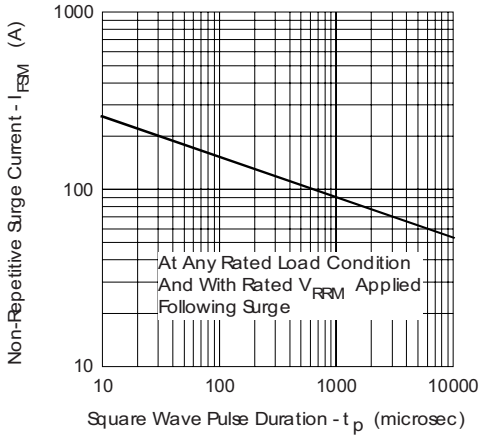


Fig. 6 - Maximum Non-Repetitive Surge Current

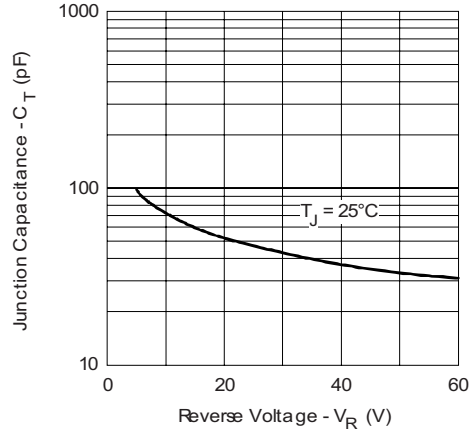


Fig. 3 - Typical Junction Capacitance vs. Reverse Voltage

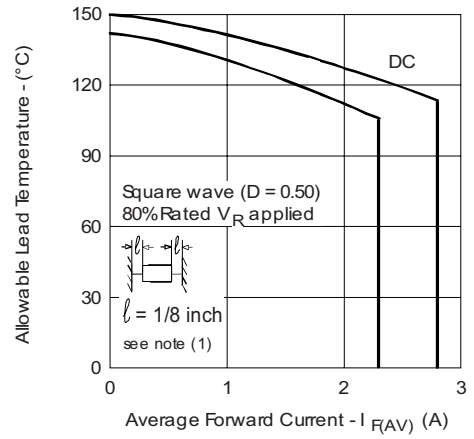


Fig. 4 - Maximum Allowable Lead Temperature vs. Average Forward Current

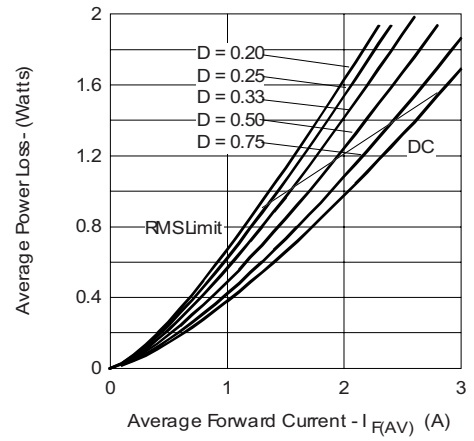


Fig. 5 - Forward Power Loss Characteristics

Note

(1) Formula used: $T_L = T_J - (Pd + Pd_{REV}) \times R_{thJL}$;

Pd = Forward power loss = $I_{F(AV)} \times V_{FM}$ at ($I_{F(AV)}$/D) (see fig. 5);

Pd_{REV} = Inverse power loss = $V_{R1} \times I_R$ (1 - D); I_R at V_{R1} = 80 % rated V_R