



1200V SiC Schottky Diode

GP3D010A120A

VDC	1200 V
Q _C	56 nC
I _F	10 A
T _{j,max}	175 °C

Amp+™ Features

Thin die, low inductance, fast switching
Yield, low cost, low power dissipation
Excellent thermal stability, high frequency
Low forward voltage drop (1.4 V)
Low reverse leakage current (0.3 μA)

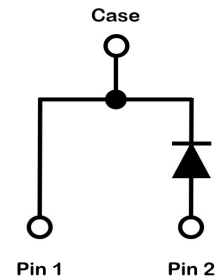
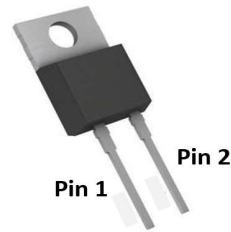
Amp+™ Benefits

Low forward voltage drop
High efficiency
Low power dissipation
Low thermal resistance
Low reverse leakage current

Amp+™ Applications

Rectifier, freewheeling diode, TCR
Oscillator, buffer, driver
DU, buffer, driver, L, L, L

Package



Part #	Package	Marking
GP3D010A120A	TO-220-2L	3D010A120



Maximum Ratings

Characteristics	Symbol	Conditions	Values	Unit
B ₂ L _h - e c b d L	H _B)	S _B 14 B S _i 064 B	23	
		S _B 014 B S _i 064 B	08	
		S _B 04/ B S _i 064 B	01	
R f d ₂ , d d _h d e c b d L - h d g e d	H _{ERL}	S _B 14 B L 7-2 -	0/ /	
		S _B 00/ B L 7-2 -	8/	
M ₂ , d d _h d d j e c b d L	H _E	S _B 14 B L 0/ -	6/ /	
		S _B 14 B L 7-2 -	31	
1 d	∫ ¹	S _B 00/ B L 7-2 -	23	1 -
Qd d _h d d j d d d 2 L f d	U _{QQL}	S _i 14 B	01/ /	U
Ch c d f f d c d -		S _i , 2 - d L d d d _h d	1/ /	U. -
Q ₂ d c h - h L _h	Q ₂)	S _B 14 B	072	V
N L _h f i b u _h - L ₂ f d L d / d L d	S _i S _i f d	B ₂ L _h 2 -	,44 064	B
R ₂ c d h f L d d L d	S ₂ c d	V d - 2 c d h f d c -	15/	B
L ₂ L _h f L ₂ d		L 2 R b d	0	M _i

Notes:

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Electrical Characteristics

Characteristics	Symbol	Conditions	Values			Unit
			h -	L -	-	
CB a2bjhf 2 L f d	U _{CB}	S ₁ 14 B	01//	,	,	U
Ad jc2 2 L f d	U _{AQ}	H ₀ 0/// S ₁ 14 B	03//	,	,	U
Ch cde c 2 L f d	U _E	H ₀ 0/ S ₁ 14 B	,	0-38	0-54	U
		H ₀ 0/ S ₁ 014 B	,	0-73	,	
		H ₀ 0/ S ₁ 064 B	,	1-01	1-6/	
Qd c d b d L	H _Q	U _Q 01//U S ₁ 14 B	,	1	1/	μ
		U _Q 03//U S ₁ 14 B	,	4	,	
		U _Q 01//U S ₁ 014 B	,	00	,	
		U _Q 01//U S ₁ 064 B	,	28	2//	
S2L b b h h d b g f d	P _B	U _Q 7//U S ₁ 14 B	,	45	,	B
S2L b b h b d	B	U _Q 0U e 0 L G	,	5/ 7	,	E
		U _Q 3//U e 0 L G	,	42	,	
		U _Q 7//U e 0 L G	,	28	,	

Thermal Characteristics

Characteristics	Symbol	Conditions	Values			Unit
			h -	L -	-	
Sgd d h L b d i b h , b - d	Q _{gB}	,	,	/ -71	0-0/	°B.V

Typical Performance

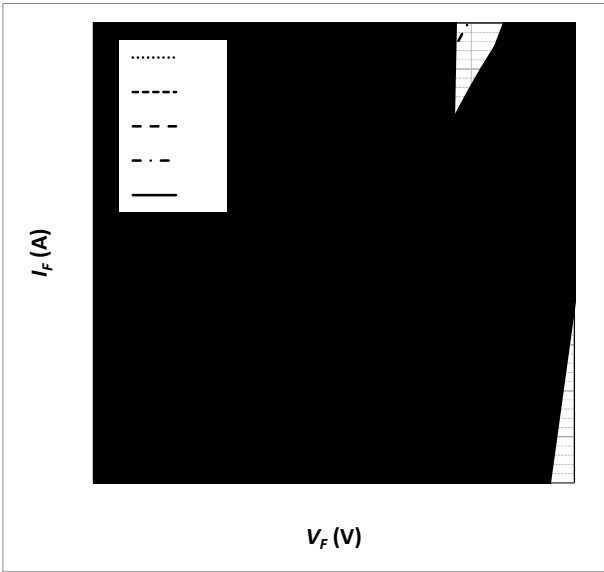


Fig. 1 Forward Characteristics

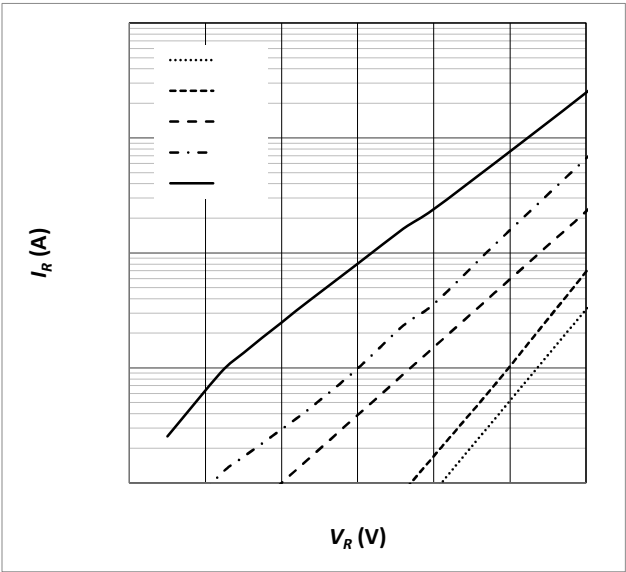


Fig. 2 Reverse Characteristics

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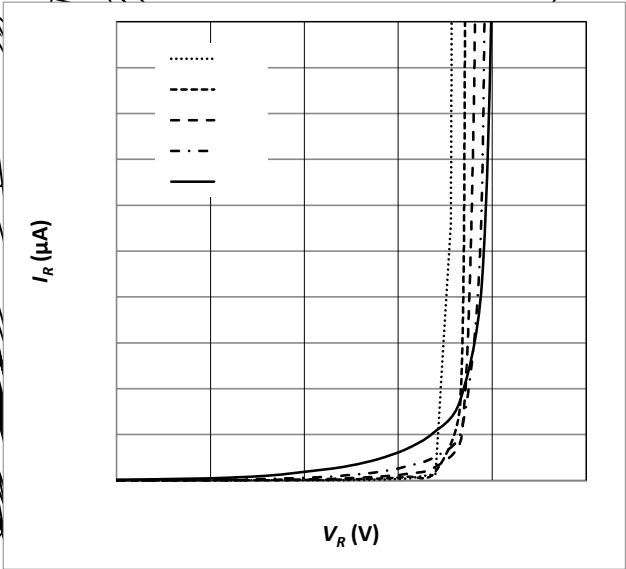


Fig. 3 Reverse Characteristics

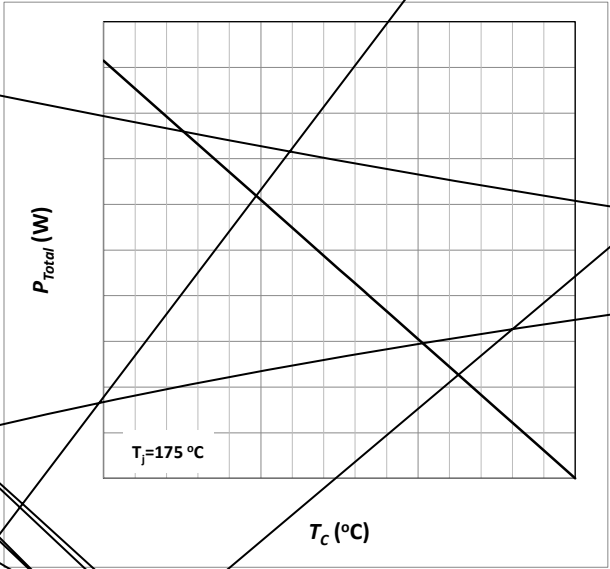


Fig. 4 Power Derating

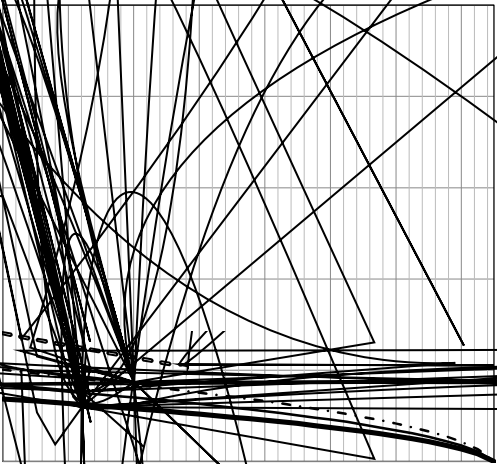


Fig. 5 Current Derating

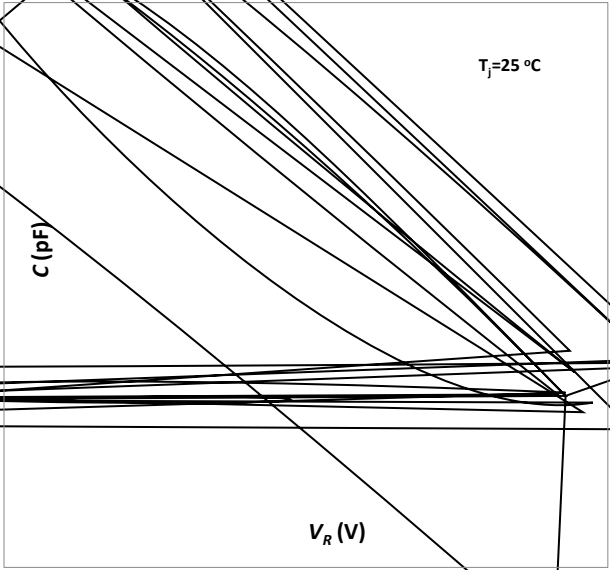


Fig. 6 Capacitance

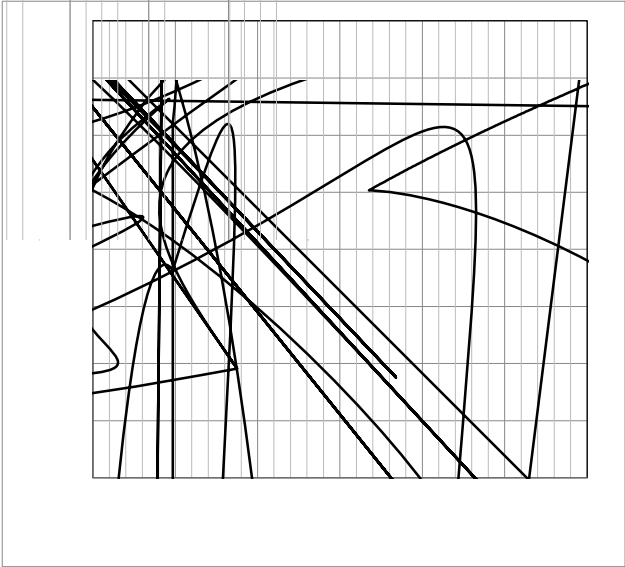


Fig. 7 Capacitive Charge

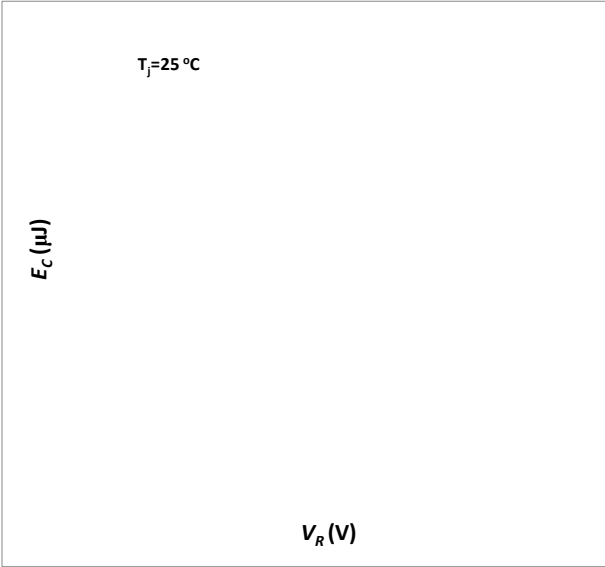


Fig. 8 Typical Capacitance Stored Energy

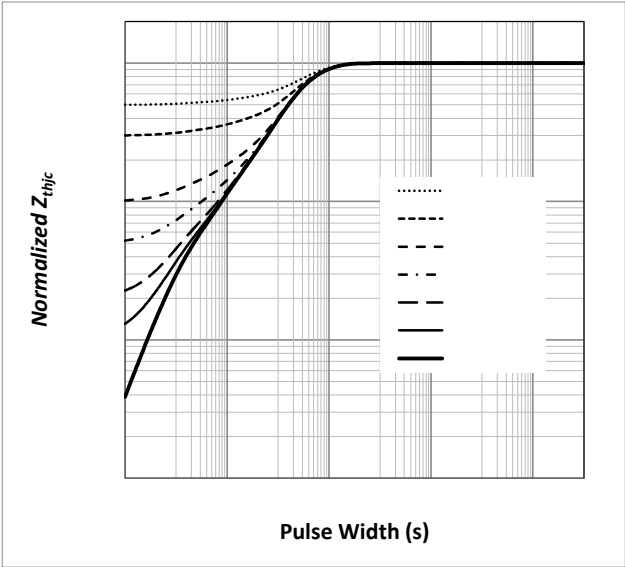


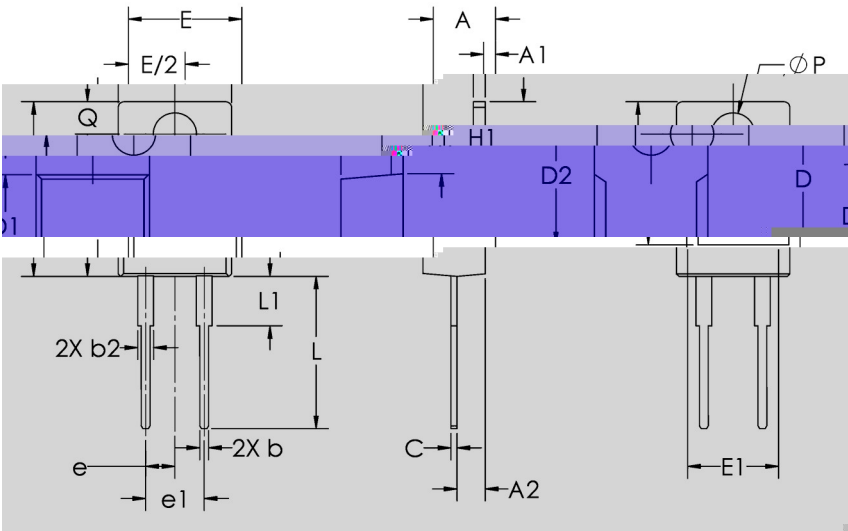
Fig. 9 Transient Thermal Impedance

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Package Dimensions TO-220-2L



Sym	Millimeters		Inches	
	Min	Max	Min	Max
	3-1/	3-6/	/ -054	/ -074
0	0-03	0-3/	/ -1 34	/ -1 44
1	1-1 2	1-81	/ -1 7/	/ -004
a	/ -27	0-1	/ -1 04	/ -1 3/
a1	0-1	0-67	/ -1 3/	/ -1 6/
b	/ -25	/ -65	/ -1 03	/ -1 2/
C	03-11	05-40	/ -45/	/ -54/
C0	7-27	8-3/	/ -22/	/ -26/
C1	01-08	02-02	/ -37/	/ -406
D	8-54	0/ -56	/ -27/	/ -31/
D0	5-75	7-78	/ -16/	/ -24/
d	1-43 ARB		-0/ / ARB	
d0	4-1 7 ARB		-1/ / ARB	
G0	4-73	5-75	/ -12/	/ -16/
K	01-46	03-62	/ -384	/ -47/
K0	2-5/	5-24	/ -031	/ -14/
O	2-42	3-1 8	/ -028	/ -050
P	1-43	2-32	/ -0/ /	/ -024

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Revision History

C id	Qd h h	Mz Ld
01.08.1/08	0-/	H h h d d - d 2 ec L - gddL
3.06.1/1/	0-0	T. h f Q.g b L h e H c Qz L
00.05.1/1/	0-1	T c ldc b j f d ch d - h -
7.5.1/10	0-2	T c ldc - f d Q.g b

RoHS Compliance

REACH Compliance