



General Description

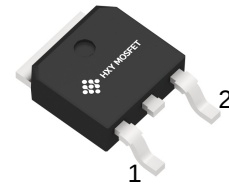
This product family offers state of the art performance. It is designed for high frequency applications where high efficiency and high reliability are required.

Features

- Low conduction loss due to low V_f
- Extremely low switching loss by tiny Q_c
- Highly rugged due to better surge current
- Industrial standard quality and reliability

Applications

- UPS
- Power Inverter
- High performance SMPS
- Power factor correction



TO-252-2L



Ordering Part Number	Package	Marking
C1D08065E	TO-252-2L	HC1D08065E





Maximum Ratings (at T_C = 25 °C, unless otherwise specified)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V _{RRM}	650	V
Surge Peak Reverse Voltage	V _{RSM}	650	V
DC Peak Reverse Voltage	V _R	650	V
Continuous Forward Current T _C = 25°C T _C = 135°C T _C = 160°C	I _F	30 15 8	A
Repetitive Peak Forward Surge Current T _C = 25°C, t _p = 10ms, Half Sine Pulse T _C = 110°C, t _p = 10ms, Half Sine Pulse	I _{FRM}	38 25	A
Non-Repetitive Forward Surge Current T _C = 25°C, t _p = 10ms, Half Sine Pulse T _C = 110°C, t _p = 10ms, Half Sine Pulse	I _{FSM}	64 53	A
i ² dt value T _C = 25°C, t _p = 10ms, Half Sine Pulse T _C = 110°C, t _p = 10ms, Half Sine Pulse	∫i ² dt	20.5 14	A ² s
Power dissipation T _C = 25°C T _C = 110°C	P _{tot}	88 38	W
Operating junction Range	T _j	-55 to +175	°C
Storage temperature Range	T _{stg}	-55 to +150	°C

Thermal Resistance

Parameter	Symbol	Typ.	Unit
Thermal resistance, junction – case.	R _{thJC}	1.70	°C/W



Electrical Characteristic (at T_c = 25 °C, unless otherwise specified)

Parameter	Symbol	Value			Unit	Test Condition
		min.	typ.	max.		
Forward Voltage	V _F	-	1.3	1.5	V	I _F =8A T _J =25°C T _J =175°C
Reverse Current	I _R	-	-	50	μA	V _R =650V T _J =25°C T _J =175°C
Total Capacitive Charge	Q _C	-	23	-	nC	V _R =400V, T _J =25°C $Q_C = \int_0^{V_R} C(V) dV$
Total Capacitance	C	-	466	-	pF	T _J =25°C, f=1MHz V _R =0V V _R =200V V _R =400V

Characteristics Curve:

Fig 1: Forward Characteristics

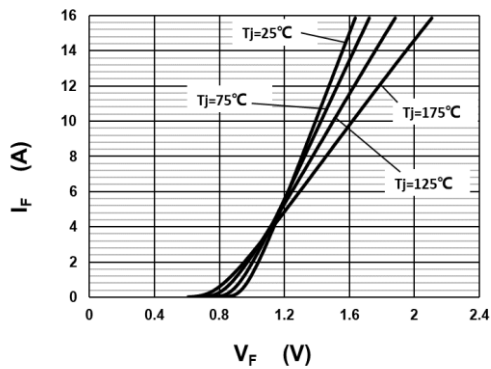


Fig 2: Reverse Characteristics

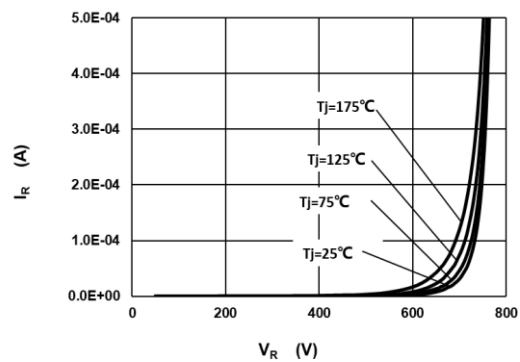


Fig 3: Current Derating

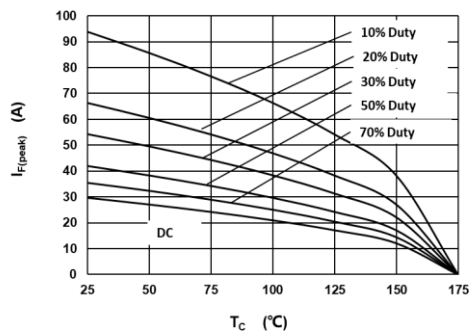


Fig 4: Power Derating

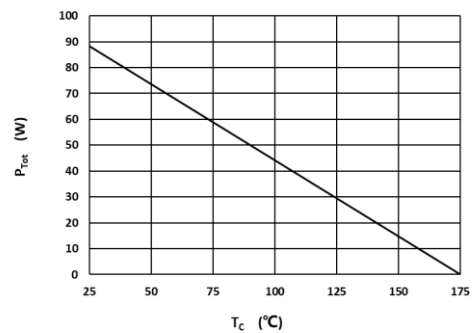




Fig 5: Capacitance vs. Reverse Voltage

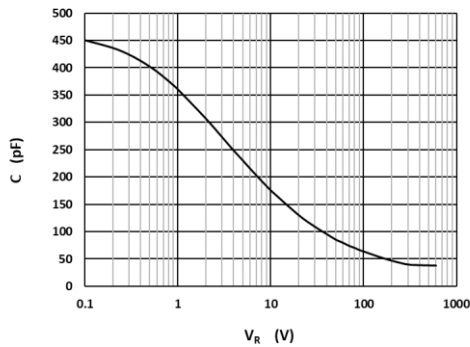


Fig 6: Reverse Charge vs. Reverse Voltage

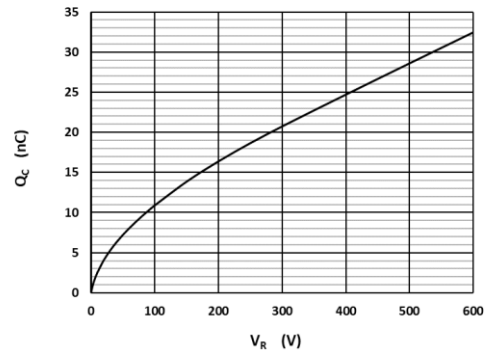


Fig 7: Typical Capacitance Stored Energy

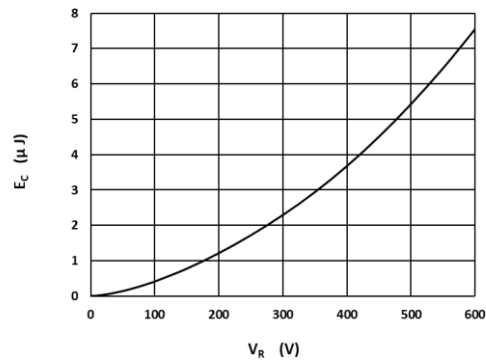
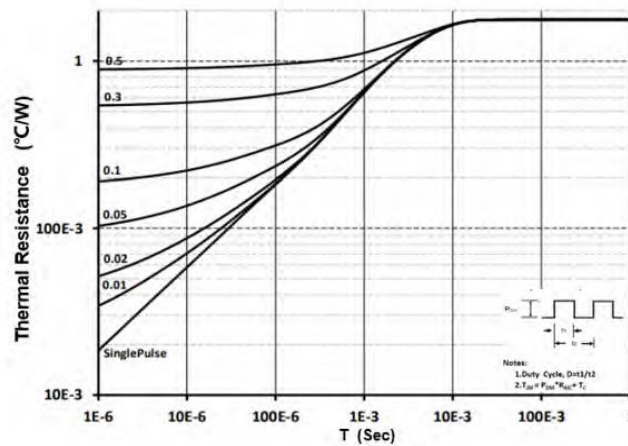
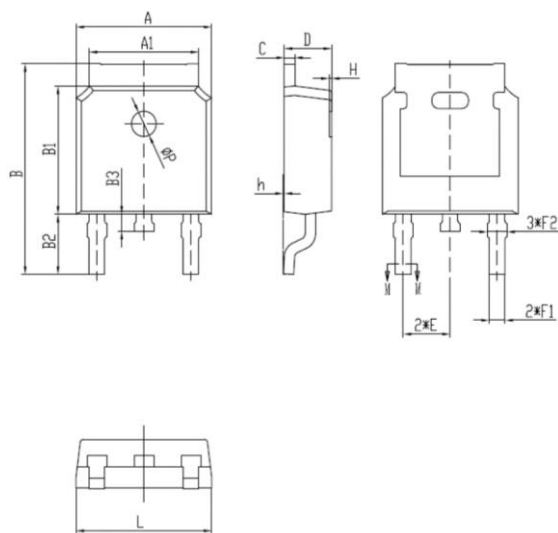


Fig 8: Transient Thermal Impandance





Package Dimensions
Package TO-252-2L



项目	规范(mm)	
	MIN	MAX
A	6.50	6.70
A1	5.16	5.46
B	9.77	10.17
B1	6.00	6.20
B2	2.60	3.00
B3	0.70	0.90
C	0.45	0.61
D	2.20	2.40
E	2.186	2.386
F1	0.67	0.87
F2	0.76	0.96
H	0.00	0.30
h	0.00	0.127
L	6.50	6.70
φ P	1.10	1.30



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