

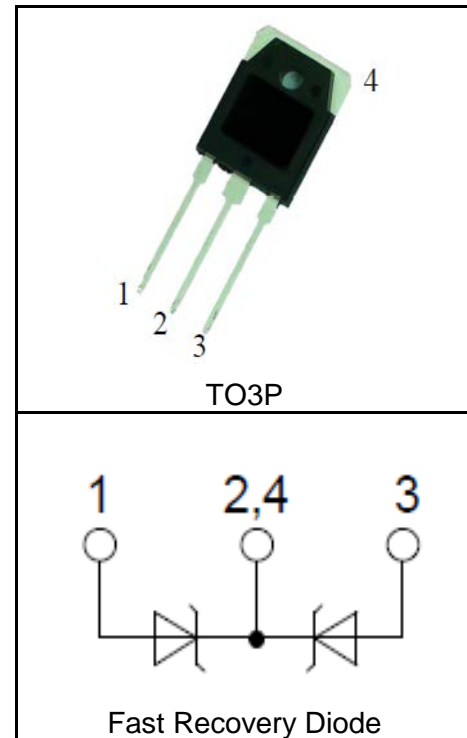
Features

- $V_{RRM} = 200V$
 $I_{F(AV)} = 2 \times 10A$
- Ultra Fast Recovery Time
- High Surge Capability
- Low Leakage Current
- Low Forward Voltage Drop
- Avalanche Rated
- Lead Free and Green Devices Available

Applications

- High Speed Power Switching

Pin Description



Absolute Maximum Ratings

Symbol	Parameter	Rating	Unit	
Common Ratings ($T_C = 25^\circ C$ Unless Otherwise Noted)				
V_{RRM}	Maximum Repetitive Reverse Voltage	200	V	
V_R	Maximum DC Reverse Voltage	200	V	
$I_{F(AV)}$	Average Rectified Forward Current, $T_C = 130^\circ C$	per Device	20	A
		per Diode	10	A
I_{FSM}	Peak Forward Surge Current, 8.3ms Half Sine Wave	100	A	
T_{STG}	Storage Temperature Range	-55 to 150	$^\circ C$	
T_J	Operating Junction Temperature	150	$^\circ C$	
Mounted on Large Heat Sink				
$R_{\theta JC}$	Thermal Resistance-Junction to Case	1.5	$^\circ C/W$	
$R_{\theta JA}$	Thermal Resistance-Junction to Ambient	50	$^\circ C/W$	
Mounted on Large Heat Sink				
$E_{AS}^{①}$	Avalanche Energy, Single Pulsed	64	mJ	

Electrical Characteristics ($T_C=25^\circ\text{C}$ Unless Otherwise Noted)

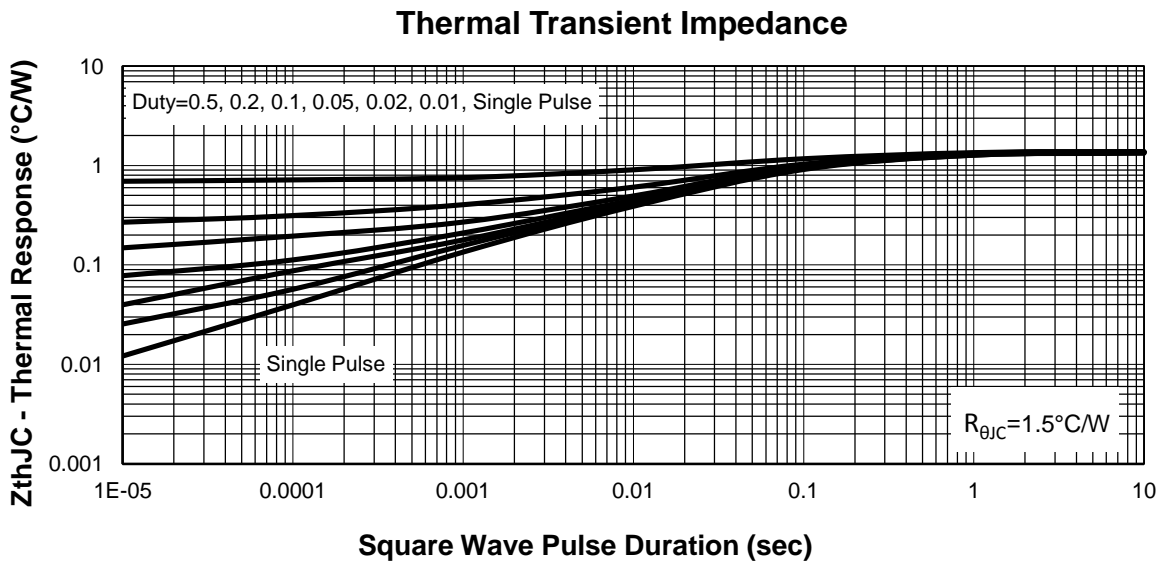
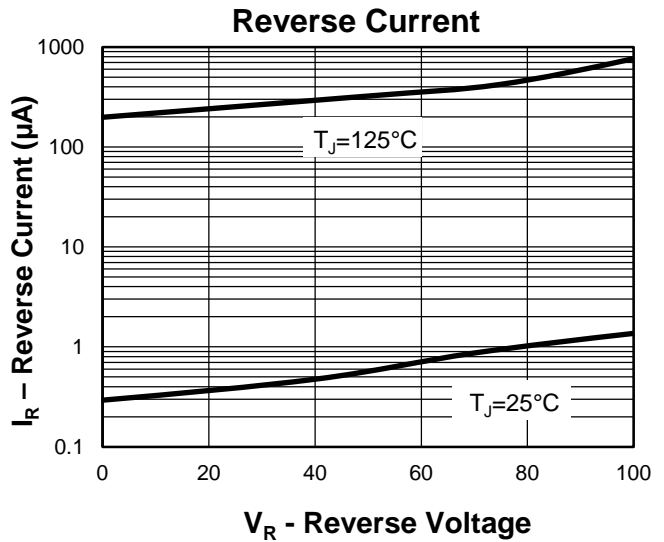
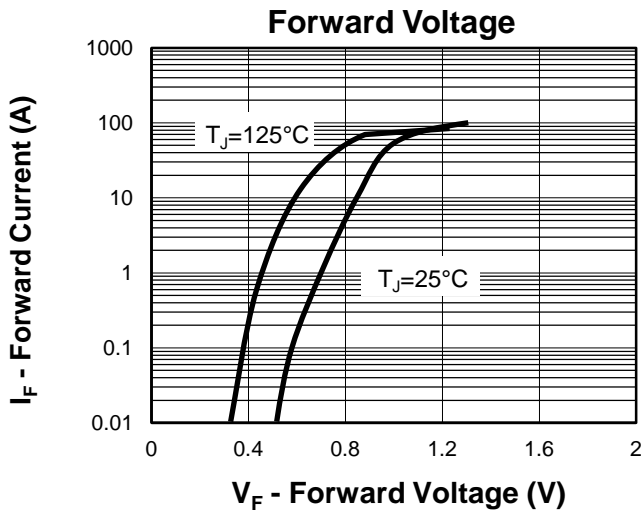
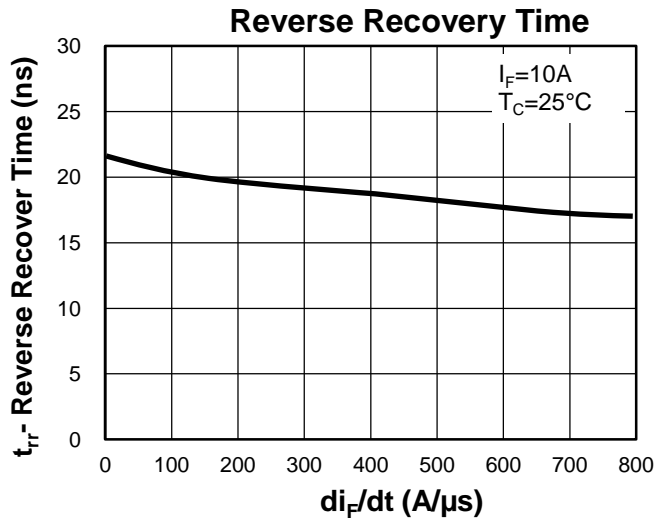
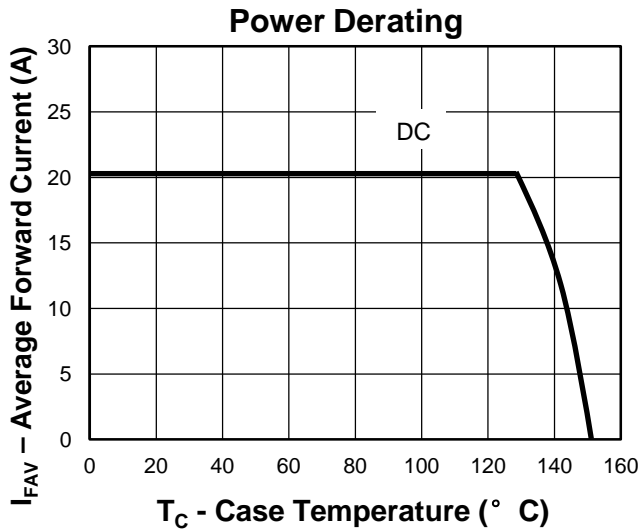
Symbol	Parameter	Test Condition	RUD2H20Q2			Unit
			Min.	Typ.	Max.	
Static Characteristics						
$I_R^{②}$	Reverse Leakage Current	$V_R=200\text{V}, T_C=25^\circ\text{C}$			10	μA
		$V_R=200\text{V}, T_C=125^\circ\text{C}$			5	mA
$V_F^{②}$	Forward Voltage Drop	$I_F=5\text{A}, T_C=25^\circ\text{C}$		0.8	-	V
		$I_F=5\text{A}, T_C=125^\circ\text{C}$		0.7	-	V
		$I_F=10\text{A}, T_C=25^\circ\text{C}$		0.85	0.9	V
		$I_F=10\text{A}, T_C=125^\circ\text{C}$		0.75	0.8	V
Static Characteristics						
t_{rr}	Reverse Recovery Time	$I_F=10\text{A}, V_R=30\text{V},$ $di_F/dt=-200\text{A}/\mu\text{s}$		20		ns

Notes: ① $L=0.1\text{mH}$.
 ② Pulse test, pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 2\%$.

Ordering and Marking Information

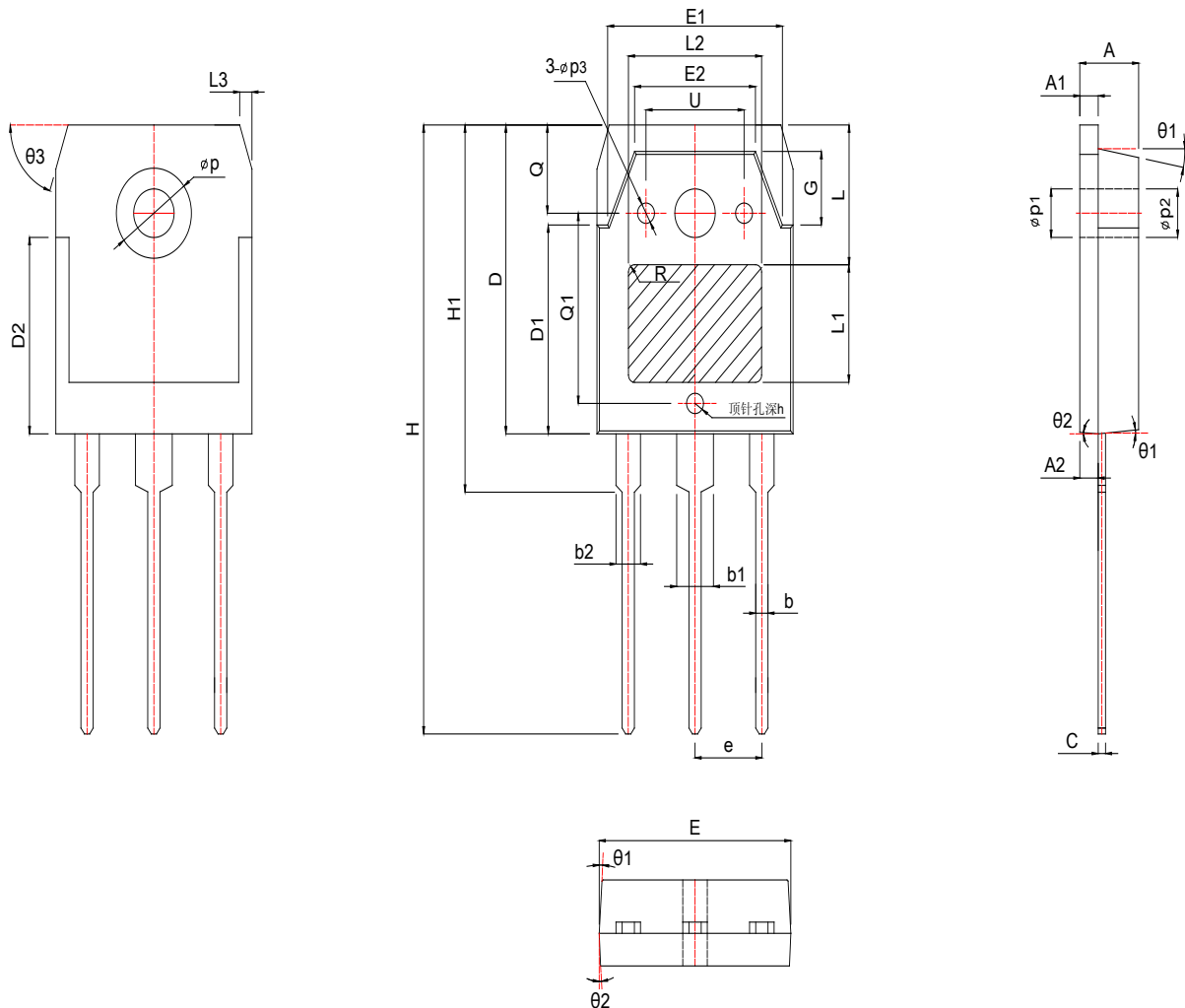
Device	Marking	Package	Packaging	Quantity	Reel Size	Tape width
RUD2H20Q2	RUD2H20Q2	TO3P	Tube	30	-	-

Typical Characteristics



Package Information

TO3P



SYMBOL	MM			INCH			SYMBOL	MM			INCH		
	MIN	NOM	MAX	MIN	NOM	MAX		MIN	NOM	MAX	MIN	NOM	MAX
A	4.60	4.80	5.00	0.181	0.189	0.197	b	0.05	0.10	0.15	0.002	0.004	0.006
A1	1.40	1.50	1.60	0.055	0.059	0.063	L	7.40TYP			0.291TYP		
A2	1.33	1.38	1.43	0.052	0.054	0.056	L1	9.00TYP			0.354TYP		
b	0.80	1.00	1.20	0.031	0.039	0.047	L2	11.00TYP			0.433TYP		
b1	2.80	3.00	3.20	0.110	0.118	0.126	L3	1.00REF			0.039REF		
b2	1.80	2.00	2.20	0.071	0.079	0.087	Phi_p	6.90	7.00	7.10	0.272	0.276	0.280
c	0.50	0.60	0.70	0.020	0.024	0.028	Phi_p1	3.20REF			0.126REF		
D	19.75	19.90	20.05	0.778	0.783	0.789	Phi_p2	3.50REF			0.138REF		
D1	13.70	13.90	14.10	0.539	0.547	0.555	Phi_p3	1.40	1.50	1.60	0.055	0.059	0.063
D2	12.90REF			0.508REF			R	0.50REF			0.020REF		
E	15.40	15.60	15.80	0.606	0.614	0.622	Q	5.00REF			0.197REF		
E1	13.40	13.60	13.80	0.528	0.535	0.543	Q1	12.56	12.76	12.96	0.494	0.502	0.510
E2	9.40	9.60	9.80	0.370	0.378	0.386	U	7.80	8.00	8.20	0.307	0.315	0.323
e	5.45TYP			0.215TYP			theta_1	5°	7°	9°	5°	7°	9°
G	4.60	4.80	5.00	0.181	0.189	0.197	theta_2	1°	3°	5°	1°	3°	5°
H	40.30	40.50	40.70	1.587	1.594	1.602	theta_3	60° REF			60° REF		
H1	23.20	23.40	23.60	0.913	0.921	0.929							

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